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SOME POINTS IN THE TREATMENT OF THE CHRONIC INSANE.

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One of the most bewildering social problems of modern times is the care and treatment of the chronic insane, those unfortunate dregs of humanity who yearly accumulate upon the hands of our various local authorities, and for whom it is necessary to provide accommodation until their demise.

Great advances have recently been made in providing for acute cases, but little has been done for the chronic lunatic, and the present paper is compiled in the hope that it may elicit a reply from the United States, embracing all that has been accomplished towards the amelioration of the lot of these unhappy individuals.

The question as to the increase of insanity is one that has been much discussed in England. For many years the Commissioners, in their Annual Reports, have denied that any such advance was taking place, and asserted that the growth in numbers was due to (1) patients being placed under treatment who previously had been cared for at their own homes, *e. g.*, certain classes of senile and congenital cases; and (2) a greater number of "officially known" lunatics. Latterly, however, they have admitted the augmentation as an undoubted fact, though some writers still appear inclined to disagree with them.

There is no doubt in my mind that we have to deal with an actual increment in lunacy each year. This is most apparent

in our large towns and manufacturing districts, less noticeable in the agricultural parts of the country.

As in any physical infirmity, treatment may be divided into three sub-classes, viz., I. Hygienic; II. Dietetic; III. Medicinal.

I. HYGIENIC MEASURES.

The hygienic surroundings of these large masses of the insane, whom we now congregate together, are by far the most important considerations for our notice.

Structural Designs.—Regarding the question of asylum construction, we are at present on the eve of a revolution of ideas. Until quite recently, all British asylums were built upon some modification of the pavilion principle, but latterly many acute hospitals have been erected, in conjunction with new, or as additions to the older institutions.

Some years ago a deputation from the West Riding of Yorkshire visited the principal asylums on the continent, and reported that the separate residence system, so universally adopted there, was unsuitable for the treatment of the insane in accordance with the requirements of the English Lunacy Commissioners.

In 1899, however, the Lancashire Board inspected these same German and French institutions, and advised that the next asylum for the County Palatine should be designed on the detached residence principle.

The new Edinburgh Asylum, which is being erected under the supervision of Sir John Sibbald, has been projected upon a similar plan.

It is a very nice question whether our efforts in this direction are not being overdone, and whether they may not in themselves be constituting an unnecessary and burdensome tax upon the rate-payer. Any one who has seen Claybury Asylum, London (the cost of which was £450 per bed), Hawkhead Asylum, Paisley (which was equally expensive), or Gartloch Asylum, Gartcosh (which cost £500 per bed), will be struck with the incongruity of taking chronic pauper lunatics from workhouses and placing them to spend the remainder of their lives in these palatial buildings. Patients of this class have never been used to such mag-

nificent residences, and there is no question of any curative agency being accomplished by their environment. Would it not be wiser to keep them in plainer and less costly tenements, with surroundings which more nearly resemble those to which they have been accustomed, devoting the money thus saved to the engagement of a more numerous staff and thus enabling increased attention to be concentrated upon the training of the degenerate in some form of occupation likely to be useful to the community at large?

Increase of Staff.—The alteration in design of our institutions for the insane will alone necessitate a much larger staff; nor will this augmentation be of any material assistance in the general administration of the estate, on account of its wide dissemination. Considering the question of medical officers only, the number in continental asylums will be found to be about 1 to 105 patients, whilst in Rainhill each physician has control of over 400 cases. A great addition to every branch of the staff will, therefore, be found essential, and this axiom introduces us to the next point, viz., the employment of the chronic insane.

Employment of Patients.—In many instances these persons are the "hewers of wood and drawers of water" to the establishments, and they could not be maintained at such a small cost (8s. 3½d. per week in this asylum) were it not for the pauper labor obtainable. At the same time it is well known to be the most unproductive and costly form of work extant, and much might be done by an increased staff to incite the less energetic to greater industry, and to instruct them in proper methods. The number of attendants available for working parties at present, is only sufficient to exercise a general supervision and prevent escapes; each patient is, to a great extent, left to his own resources and little tuition is undertaken.

But a large class of lunatics remain to be dealt with who are said to be incapable of any work, and the lives of these individuals are essentially dull and depressing, consisting as they do of a daily cycle of meals and exercising, either in the grounds or beyond the asylum precincts. A game of some sort, the weekly dance and an occasional dramatic or other entertainment fill up a life which cannot be said to be well spent, and is likely to engender early dementia from its unvarying monotony.

How different might the existence of these unfortunate patients be made! Instruction in fret-saw work, poker work, macramé work and other forms of occupation could be given daily, bi-weekly or at longer intervals, and there are but few of our dements who could not eventually be trained to occupy themselves in some mechanical way, the resulting efforts being sold to defray the cost of tools and increased staff necessary for instruction, and any surplus being entered to the credit side of the asylum expenditure.

A beginning has already been made in this direction at Woodilee Asylum, Lenzie, where a number of lady volunteers give bi-weekly lessons in poker and macramé work, the class being enlivened by instrumental music likewise provided by the visitors.

Until last year, one English Asylum (Wakefield) wove all its sheeting and dress materials, as well as coarse canvas for strong clothing, and employed in this way from fourteen to sixteen men and boys daily. Now this weaving-shed has been swept away, owing to the "decay in the hand-loom weaving industry," and its site is to be devoted to an additional ward for epileptics. Surely the mechanical movement necessary to throw the shuttle could be taught to many a fatuous patient!

The above occupations are only mentioned as examples, and many others could be added thereto, were not the question of expense always paramount in the engagement of instructors. Hat-making and basket-making, leading up to the higher branches of wicker-work manufacture, should be included in our category, and there seems no legitimate reason why bird-cages and wire-work of all kinds should not be produced upon asylum premises. A printing press should invariably be set up as a means of reducing the costly bills under this heading.

The need for a proper number of adequately instructed laundresses will be obvious to any one who has witnessed the devastation made amongst one's personal effects by these factory operatives and mill-hands, who have never been taught the elementary principles of the wash-house. The darning and mending is often a mere travesty, and there remains ample scope for tuition in this department, it being a popular fallacy that any woman can do needlework.

Sewage Disposal.—The last few years have seen great advances

in the disposal of asylum sewage, and one of the various methods of bacteriological treatment is, without doubt, the best. Of these there may be said to be three main varieties, viz.:

(1) Irrigation and bacteriological aëration.
(2) Bacteriological aëration and filtration.
(3) Septic tank and bacteriological aëration.

Concerning the last, it may be stated to be the most costly of the series, whilst the resulting effluent is no purer than that obtained by the other methods.

The second class is suitable for estates where the gradients are too steep to admit of the removal of the solid matters by irrigation, as is exemplified at Hawkhead Asylum, Paisley. In this land there is a drop of over sixty feet from the Administrative Block to the sewage beds, which are not more than 100 yards away. The filters are four in number and measure 50 x 25 feet. The upper pair consist of twelve feet of clinkers, while the lower are made up of six feet of coke-breeze. The crude sewage is run upon the upper beds alternately, only the paper and rags being caught by a grating, introduced into the main drain, which is cleared daily. On these beds the solid matters become gradually disintegrated; the liquid percolates through the twelve feet of clinkers and passes on to one of the lower beds, where it filters through the six feet of coke-breeze, from the bottom of which a good effluent is discharged.

Irrigation and bacteriological aëration is the method employed at Rainhill Asylum, Liverpool, where there is only a fall of three feet between the annex and the sewage tanks, which are nearly half a mile distant. Very excellent results are being obtained by this treatment. The crude sewage is first run over the land, and solid matters, papers and rubbish, are deposited. At the end of this journey it reaches the sewage tanks, the most successful of which are arranged upon the double aëration principle. These tanks measure 78 x 59 feet and are two in number. The liquid sewage passes into the upper tank and remains there eleven hours. Thence it flows over a sill into the lower one and in this it stands for eight hours. The average depth of these tanks is one foot four inches of mixed cinders, so that the pair are capable of purifying 12,780 gallons of sewage in nineteen hours (one day). There are a number of others arranged upon the single

aëration principle, but the effluent obtained from these is in no way comparable with that resulting from the above method.

Lighting.—Very little need be said about the lighting of asylums. It is universally conceded that electricity is the best method, and installations have been already made or are nearing completion in many institutions.

Ventilation.—Most of the older British asylums are extremely defective in their ventilating arrangements. All kinds of more or less inefficient systems are in vogue, but practically all of these buildings are dependent on perflation or cross-draught between the windows and doors.

It is largely to this fact that we are indebted for our great mortality from respiratory diseases. The vitality of the insane and their power of resistance to disease are greatly lowered; yet these poor creatures are made to sit all day (and often to sleep all night) exposed to draughts of cold air in a country which is notorious for its rainfall and the prevalence of northeasterly winds.

There is but little doubt that the introduction of a proper system of ventilation would greatly decrease the death-rate from phthisis and other respiratory disorders in institutions for the insane, and every one will watch with interest the new apparatus erected at the Acute Hospital of the West Riding Asylum, Wakefield. This resembles what has already proved so successful at other buildings in that city, consisting of the introduction of air, dried or moistened, and warmed or cooled, as may be necessary, by means of inlets at the tops of the rooms, and the withdrawal of the foul air through outlets near the floors by means of electric fans working in the basement.

Heating.—The heating of lunatic asylums is also worthy of notice, and the three methods commonly in vogue may be said to be preferable in direct proportion to their cost as follows: (1) Hot water; (2) Hot air; (3) Steam. Space, however, does not admit of my discussing this vexed question; suffice it to say that each method finds its advocates.

II. DIETETIC TREATMENT.

With regard to the dietary of our chronic patients, a few points call for comment. The food is usually sufficient in quantity and

of a thoroughly nutritious kind; but greater variety in the daily menu is distinctly to be desired, and unquestionably it would be better if the patients were ignorant what their dinner was to consist of until it was set before them.

Here again one feels bound to allude to certain North British asylums as being the pioneers. At Woodilee a different dietary has been drawn up for every day of the month, whilst at Hawkhead the food allowances are more generous than at many an institution for private lunatics.

Allusion may be made here to the wastefulness of the customary Friday fish dinner, a meal which is extremely unpopular with all but the Roman Catholics, many patients not even touching the unwelcome fare. By all means provide for Catholics the weekly penance which their religion dictates; but why compel every one else to eat food which is too often insipid and unappetizing, or else remain hungry?

Similarly, on certain week-days Jewish patients refuse to taste even the potatoes which have come into contact with meat which their religion expressly forbids them to consume.

Another meal to which exception is taken by many is the weekly one of pea-soup with dumplings or pudding of some kind and cheese, and it is very doubtful whether this is sufficiently sustaining to justify us in its continuance. The writer is distinctly of opinion that a portion of meat, in some form, ought to be given every day to those who will avail themselves of it, and feels confident that the advantage of this plan would be found in the lessening of sickness and disease. A good example bearing out this theory may be seen in the case of the Irish asylums, where the dietary is miserably inadequate, and the death-rate from tubercular diseases so appalling.

The general trend of experience with the epileptic insane is that they should subsist on a purely vegetarian diet.

Next as to beverages: The choice between tea, coffee and cocoa at the morning and evening meal is of trivial importance from an economical point of view, though nutritionally the last named is by far the most desirable, and the selection might well be left to individual choice.

The abolition of beer as an accompaniment to the dinner has been so successful that there is no necessity to discuss a practice

which has been unanimously adopted; suffice it to say that the administration of alcohol, in any form, to the insane (except in cases of serious bodily illness) is to be condemned. At the present time the writer is engaged upon an interesting enquiry as to the frequency of alcoholic intemperance as an exciting or predisposing factor in the causation of insanity, and the figures so obtained point to a percentage about three times as large as any which has hitherto been published. The desirability of banishing alcohol entirely from our dietary need not, therefore, be enlarged upon.

In some few asylums milk is provided at the midday meal, but its regular supply would entail much more extensive dairying and grazing than the acreage of most estates renders possible.

III. MEDICINAL TREATMENT.

Lastly, we come to the consideration of the medicinal treatment of the chronic insane. This, of course, is mainly symptomatic. Any physical disease will require combating by ordinary methods, and it is unnecessary to enlarge further upon these particulars.

The mental symptoms of such patients, however, may be touched upon, more especially with regard to the control of the turbulent cases found in refractory wards.

There is a general tendency in the medical profession to overdo anything which receives our official sanction, and this is noticeable all over the civilized world. For instances, we may mention the treatment of phthisis pulmonalis by Koch's tuberculin some years ago, and the present boom in the open-air treatment of the same disease. Two of the most essential factors in the latter method are constantly being lost sight of, namely, (1) suitability of climate and (2) persistent overfeeding. Some of the most favorable conditions for the development of the tubercle bacillus are a damp atmosphere with prevailing northeasterly winds and an absence of sunlight. It should follow, therefore, that the treatment of phthisical patients by the open-air method in damp, cold, windy localities, will only accelerate the fatal termination.

The inclination to exaggerate methods of treatment upon which we may embark is particularly noticeable in lunatic asylums. For some years past it has been the fashion to

derogate any checking of the noisy excitement and destructive habits so common amongst the chronic insane. The administration of "sedatives" to the patients and their so-called "punishment," either by "deprivation" or confinement to side-rooms, has been condemned by many leading authorities.

To any one who has visited an asylum in which unbridled license in the matter of noise is permitted, the question will occur: "Are we not carrying our restrictions to an absurd extent?" The incessant shouting, which goes on from morning to night, all the year round, in the refractory wards of such institutions, can only be harmful to the inmates themselves; whilst to the staff, who are condemned to spend thirteen hours in such an uproar, the effects must be well-nigh distracting.

It has been suggested to me by one of the commissioners, that much might be done to check this turbulence by the distribution of refractory cases throughout the whole building, but there are many difficulties in an arrangement of this sort, and with the class of patients we receive here, many of whom are only suitable for incarceration in a criminal institution for the insane, it would be almost impracticable.

With regard to the sleeping accommodation for this class, the writer has been informed by one of the highest authorities in the British Islands that "the asylum of the future will have no side-rooms."

A paper was published lately in which the authors claimed that the chronic insane may be cured of their destructive, noisy and dirty habits by bedding them in lighted dormitories with a night attendant in each. It was difficult to see what effect the presence of an attendant or a light could have upon vice or degradation of years' standing, and the following account of an experiment in this direction conducted at Hawkhead, by desire of the medical superintendent, Dr. Watson, will show how impossible such an arrangement would be, unless the cases were previously selected.

Sixteen chronic females, all of whom had been accustomed to sleep in side-rooms on account of noise, violence, destructiveness or degraded habits were bedded in a lighted dormitory at 6.30 P. M. Three nurses were allowed for the first night. At 7.45 P. M. I was called to the scene, and can only describe the noise

which greeted my ears on ascending the staircase, by comparing it with what one hears in the lion-house of a zoological garden just before feeding time. Upon reaching the dormitory, everyone was found to be shouting at the top of her voice; three women were patrolling the room, one of them stark naked; the nurses were rushing about putting people back into bed, but as fast as one was covered up, another emerged from the bed-clothes. The staff was utterly exhausted, one member having received a severe black eye, and another having had a quantity of hair torn out by the roots; in fact, it is doubtful whether the night could have been got through under this condition of things even if six nurses had been placed in the dormitory, and one cannot possibly see how such measures could be of the smallest benefit either to the patients or staff. Doubtless the answer made to this account of our experiment will be: "Had you persevered for a few nights the benefit would have become apparent," but, as a staff equal in number to the refractory patients would be essential in order to give it a prolonged trial, the method evidently falls outside the range of treatment which can be adopted in a pauper lunatic asylum.

A few lines may next be devoted to considering the drugs at our disposal for general and symptomatic treatment. There is a large armamentarium of sedatives and hypnotics to be selected from, and all can be used with equal impunity, if the cases for their administration are properly selected. The writer has had no mishap during the last twelve years, and absolute safety may be assured in their exhibition so long as the heart be free from disease.

Any cardiac, functional or valvular, trouble should negative the employment of chloral, hyoscin or hyoscyamin, and these drugs are also contraindicated in exhaustion from prolonged excitement. Otherwise they may be given with good effect in cases of noisy turbulence or suicidal impulse, the first of them being perhaps the most reliable.

One-twelfth of a grain of hyoscyamin, taken by the mouth, will be found a very convenient method of administration, and this alkaloid may also be injected hypodermically, the dose having been increased up to one-fifth of a grain without bad effect. It has often been given successfully by the rectum, starting with a quarter of a grain and going up to two grains.

Hyoscin is best given through the needle, but one of its greatest disadvantages is that each successive dose must be largely increased to produce the same effect. An example of this occurred in one of my patients who suffered from uncontrollable suicidal impulse and homicidal fury. One-eightieth of a grain of the drug produced six hours' sleep on the first night, one-fortieth and and one-twentieth were required for the same period on the next two nights, whilst one-tenth of a grain only induced one hour's repose on the fourth occasion of administration.

The habitual use of any of these substances is to be deprecated as tending to mental deterioration in exactly the same way as the morphia habit or opium-smoking does.

For troublesome senile dements and feeble cases generally, paraldehyde is perhaps the most valuable substance. It is admitted to be a pure hypnotic, a cardiac stimulant, and free from any evil after-effects. The vile smell and taste of the fluid, from which so much opposition has arisen, will not be found to trouble the class of patients to whom we are now alluding. The dose may be said to be from one to two fluid drams or even more, and the writer has never had any reason to give it in ten or fifteen minim quantities, as advised by some authorities. At times we read of deaths after its use, but I am inclined to think that either the patient was not in a fit state to tolerate the drug or that the fatal issue would have taken place even had no medicine been given.

A very useful formula in chronic noisy patients is the old "green mixture," consisting of thirty to sixty grains of bromide of potash with an equal number of drops of the tincture of Indian hemp. Perhaps this combination will be found of more advantage amongst women than in the male wards.

Another valuable prescription, which has fallen into disuse lately, consists of Battley's solution and sulphuric ether in equal amounts. It will be found of great service in relieving the intense depression of certain melancholics. This is the one class of case in which I think the exhibition of opium or any of its alkaloids is permissible, and even these patients should not be given it if they show any signs of kidney mischief or cardiac hypertrophy. Renal disease is exceedingly common amongst the insane, and when it is mentioned that in certain asylums a

normal kidney is rarely seen on the post-mortem table, sufficient warrant has been given for the above rule.

Sulphonal, trional and tetronal may all be mentioned together, the last as being practically inert and generally unsatisfactory. Very good results can be obtained from trional in ten to twenty grain doses, but it is not suitable for old people, and the only case of even temporary ill-effect that has occurred to me was that of a troublesome old dement of sixty-six, for whom I had ordered ten grains of trional, and to whom half the dose would have been better suited.

Sulphonal and chloral are to be looked upon as our sheet anchors in cases of concurrent chronic excitement. A single dose of thirty grains may be given where there is no cardiac disease, and if it is desirable for the patient to have more than one dose, chloral is perhaps to be preferred. The danger of hæmatoporphyrinuria has been much magnified; it is not likely to appear if the drug be exhibited in moderation, and withholding the sulphonal quickly causes its disappearance from the urine.

In cases which do not yield readily to one of the above medicaments, a combination of two or more of them will speedily produce the desired effect. Setting aside the question of mental deterioration occurring from their administration, the welfare of the community is of paramount importance, and should always take precedence of the consideration of the individual. A dormitory of sleeping patients is not to be rendered miserable by the uproar proceeding from one or two inmates, nor are twenty general paralytics in contiguous side-rooms to be moved to boast of their wealth and grandeur all night because of the ravings of one exalted person. Moreover, the day staff must not be kept awake by noise and tumult or it becomes inefficient.

Bromides should be administered in all severe cases of epilepsy as a matter of daily routine. Nothing else has proved even palliative in this hopeless affection, and although the customary outcry of "mental deterioration" has been raised, it is mainly a matter of imagination. As a means of lessening the number of fits and soothing irritability, the potash salt is unexcelled in asylum cases, but the other combinations are equally valuable in their own spheres.

It has been my privilege to have the care of an out-patient

department for some years, during which period many of the milder cases of "haut mal" presented themselves for treatment. In the least severe of these, nothing is more beneficial than the compound bromide of sodium and ammonium, whilst the plain ammonium salt takes next place in potency, the sodium bromide coming at the top and immediately below the potash salt which I rarely prescribed. Most excellent results were obtained by the three first-named; the fits lessened in frequency and the patients were enabled to follow their usual avocations.

But the denizens of our epileptic wards are the very worst of their class (all mild cases being retained in the workhouses owing to inadequate asylum accommodation), and nothing is sufficiently powerful to affect them but potassium bromide, either alone or in conjunction with the hydrate of chloral. These poor creatures have been saturated with borax, antipyrin, the bichromates and even various quack nostrums in their day; one of the latter, which is most advertised, consisting merely of opium and bromide of potash. Certain patients are known to have required constant treatment with the last-named salt for thirty or forty years, on account of the fearful injuries sustained in their falls, and yet many are far from complete dementia at the end of that period. Moreover, epilepsy in itself tends in this direction, and usually there is no reason for supposing that the disease has not followed its ordinary course, without medicinal aid.

The use of the glandular extracts of various kinds need only be alluded to momentarily, for, as far as the chronic insane are concerned, all have proved equally worthless in the writer's hands.

In conclusion, this paper would seem incomplete without some reference to the epileptic colonies which have proved so eminently successful. Unfortunately they will only absorb a very small minority of asylum inmates, for many are incapable of occupation, while others are too dangerous to be trusted with tools or allowed away from constant observation. Every asylum of any size contains from twelve to twenty of the latter cases (who really ought to live apart, with half their number of guardians), and many less impetuous beings have to be provided for also. If we were able to maintain an attendant for each two patients of the former category, some effort might be made to accept the inevit-

able risks consequent upon their manual employment, but this condition is never likely to occur, and all that can be achieved is to lessen their seizures and furor as much as possible, preventing injury to themselves or others by ceaseless vigilance.

RAINHILL, 24th January, 1901.

NOTES ON THE CONTRACTS AND TORTS OF LUNATICS, WITH SPECIAL REFERENCE TO THE LAW OF MARYLAND.

By WILLIAM H. BUCKLER.

(Being a Paper read at the Sheppard and Enoch Pratt Hospital.)

The legal status of the insane, with regard to contract and tort, is a branch of the vast law of lunacy. This term is the legal equivalent of the medical word insanity, and unfortunately the law affecting the insane has by its lack of logical basis often shown itself worthy of that unscientific title. My point of view is purely legal. I shall not consider (1) insanity, which is mental unsoundness from the medical point of view, nor (2) medical jurisprudence, which is the application of medical science to the administration of the law, nor (3) that intricate portion of the law of lunacy which deals with the legal commitment and custody of the insane.

The following definition is given by Blackstone (Bk. I, 304): "A lunatic is one who hath had understanding, but by disease, grief, or other accident, hath lost the use of his reason. He is indeed properly one that hath lucid intervals, sometimes enjoying his senses and sometimes not, and that frequently depending upon the changes of the moon." These last words explain the origin of the term lunacy. Although absurd on its face, and referring properly to a single phase of mental unsoundness, it has somehow firmly established itself in legal terminology. Both in England and America the word "lunatic" is commonly used, in statutes and by legal writers, as a generic term denoting any person of unsound mind.

To medical men, however, the legal view of insanity appears more unscientific than it really is. The law cannot recognize medical distinctions or classifications. It does not, and need not, ask whether the brain of a given individual is wholly or partially affected, whether the disease is slight or serious, or how it was

caused. The law is confronted by questions such as these: Is a given contract enforceable? Is a given will valid? Was a given criminal responsible for his act? In order to answer those questions it is necessary to ascertain whether the individual, at the moment when he performed the act, was or was not under the control of reason. In cases where a man's lunacy is alleged, the question therefore comes to this: Were his mind and will, at the given time and with respect to the particular transaction, in a rational state and capable of intelligent exercise? As the medical answers to this difficult question are often conflicting, it is not surprising that the law sometimes hesitates or bungles.

It is only in matters where the will or intent of the individual comes into action, that the special privileges of the lunatic can arise. In other respects the lunatic and the sane man stand upon an equal footing. For instance, a lunatic can be sued, and can have a valid judgment rendered against him, for a debt contracted when he was sane.[1] If that judgment remains unsatisfied, his property can be sold by the sheriff, and the purchaser will get a good title.[2] Similarly a decree in equity against a lunatic is a valid bar to a bill in equity on the same question instituted by the lunatic's committee.[3] And again, an individual who has made an agreement when sane will not be released from performance by subsequently becoming a lunatic. Though he cannot himself perform, the court will appoint a trustee to carry out the contract for him.[4] In these cases the lunatic is passive, and he is consequently treated as though he were sane.

But where the lunatic performs an act, such as a contract, a tort, a testament or a crime, which, if performed by a sane man, would necessarily involve an exercise of his will, then in respect to that act the sane man and the lunatic must stand in different positions.

The following classification and definition of the various forms of lunacy may be useful, though the terminology of the various cases is by no means exact or consistent:

[1] Stigers *vs.* Brent, 50 Md. 214.
[2] Tomlinson *vs.* Devore, 1 Gill 345.
[3] Royston *vs.* Horner, 75 Md. 557.
[4] Owings' case; 1 Bland Ch. 370, 381.

Unsoundness of mind may be total, as (1) idiocy, in which a man is "a natural fool from his nativity;" or (2) lunacy, in which a man originally sane has lost his reason from disease, grief or accident. This usually denotes complete unsoundness of mind. But the lunatic may have lucid intervals. If there be such intervals, then as long as they last, and unless he has been formally adjudged a lunatic, he returns to the status of the sane.

Or the mental unsoundness may be partial in degree, as (1) dotage, which is the decay of the mental faculties from old age; or (2) imbecility, which is a weakness of mind analogous to dotage. (In both these forms, the sufferer is treated as sane, unless fraud or undue influence has been practised upon him. In the absence of these, his acts are valid); or (3) monomania, which is mental unsoundness in some particulars, accompanied by soundness of mind in all other respects. Of this form kleptomania, pyromania, nymphomania, homicidal mania, are a few among many instances. As to these forms it may be said that the sufferer is legally regarded as sane, unless his monomania directly affects the particular act under consideration.

Or the mental unsoundness may be partial in point of duration, as (1) delirium, which is a temporary loss of reason, produced by disease; or (2) intoxication (if complete, this is treated like lunacy; if only partial, it is treated like dotage or imbecility); or (3) lunacy, with frequent or prolonged lucid intervals.

It will thus be seen that lunacy has many different meanings. I shall here employ the word lunatic as denoting a person of unsound mind, irrespective of duration or degree, because with the exception of the Latin *non compos*, there is no other general term. *Non compos*, though unknown to the classic Roman lawyers, is a very old term, having been used in the statute "de Prerogativa Regis" of 1324, by which lunatics were declared to be under the King's care. It was also the generic term preferred by Sir Edward Coke. But it is too pedantic for everyday use.

The care and custody of lunatics has been dealt with at great length by statute, both in England and in this country. With this, as at first remarked, we are not now concerned. Our present subject, the legal status or civil capacity of the lunatic, is in England and in the United States almost entirely a creation

of the common law. It has been developed by that legislative power which resides in the breasts of our judges, and it has been from time to time promulgated in their decisions. While its piecemeal mode of creation has doubtless been a source of confusion, yet the flexibility thus imparted should make us congratulate ourselves that this branch of the law has not been crystallized into code or statute, and has always remained in a progressive state.

We may consider the question of lunatic status in respect to (1) criminal responsibility or (2) testamentary capacity, or in respect to (3) contracts or (4) torts. Space forbids us at present to consider more than the two latter points.

I. *Contract.*—First. What is the test of lunacy?

If the law of testamentary capacity is examined, we shall find that, in the earlier half of the present century, it was held that any derangement of the mental faculties was fatal to such capacity. If unhinged in one respect, the mind was regarded as unsound for all purposes. Without dwelling here upon the process by which that theory became exploded, it is sufficient to repeat that the present question as to the test of mental unsoundness may be thus put: "Was the person whose act is questioned able at the time to understand its nature and to judge of its consequences, and was he a free agent with regard to that act?"

Second. If the above question has to be answered in the negative, let us see what becomes of a contract made by the person so affected.

The earliest rule of English law as to the contracts of lunatics was based on the maxim of the Institutes: "Furiosus nullum negotium gerere potest, quia non intelligit quod agit." This means that in Roman law all contracts made by lunatics were void. Inasmuch as the essence of contract is *consensus*, or the meeting of two or more minds, it should follow that, when one of the minds is destroyed by insanity, the contract must itself be destroyed. The Roman theory was thus perfectly logical; nevertheless it is not the theory of our common law.

At some time prior to the 15th century the singular rule arose, to which Coke has given great prominence, that "no man shall be allowed to stultify himself by alleging his own incapacity." This was diametrically opposed to the older rule just stated, for

it meant that lunacy was not a good defence to an action on a lunatic's contract, nor a valid reason for setting aside a lunatic's deed. It was justified on three grounds: First, that it was wrong for a man to inflict a blemish upon himself; second, it was dangerous to enable a man to counterfeit insanity and thus to escape from his agreements; third, public policy favored alienations of property, and it was therefore unwise to enable them to be annulled, as they might be if insanity could be pleaded.

To us these reasons do not seem convincing, and Coke's rule has been severely criticised and repeatedly disregarded. But its influence, as we shall see, still remains.

The present rule is, that a lunatic's contract is voidable at his option (but not void), and that such contract is not even voidable, when executed in such a manner that the parties cannot be restored to their previous condition, if the lunacy was not known at the time to the sane contracting party, and if the contract be fair and free from fraud. In other words, when a lunatic is sued on his executed contract, the burden of proof is upon him to show (1) his mental unsoundness at the time of the contract, (2) the fact that his unsoundness was known at that time to his adversary, or (3) the fact that he was imposed upon, either by receiving no consideration, or by deriving from the contract no adequate benefit.

The two leading cases on this subject in England are Molton *vs.* Camroux (4 Exch. 17), decided in 1848, and Imperial Loan Company *vs.* Stone (1 Q. B. 599), decided in 1892, both of which are frequently cited.

In the earlier case a lunatic had paid to an insurance company a considerable sum for the purchase of an annuity, and the annuity was received by him for several years until his death. His executors then brought suit, and tried to recover from the company the amount of the purchase money. They proved that he had been insane at the time of the contract. But they could not show that the insurance company had known this fact, or had dealt with him otherwise than in perfect good faith. It was held that the lunatic's executors could not recover; but the court did not go so far as to say that all his executed contracts bind the lunatic, if the other party be not in fault.

The case of Imperial Loan Company *vs.* Stone took this

further step, by laying down that a lunatic's executed contract, free from fraud, can be avoided only when the lunatic's condition can be shown to have been known to the other party. It also decided that the burden of proof of the knowledge of lunacy is on the party alleging it. We may add, on the authority of a case decided by Judge Redfield in Vermont,[5] that if the sane party when dealing with the lunatic could with ordinary prudence have ascertained his condition, the knowledge which the sane man ought to have had will be imputed to him, and his contract with the lunatic will be held void.

One of the three elements necessary to sustain the validity of a lunatic's contract is that it should be fair as well as free from fraud. If it be not so, then the sane party has clearly been at fault, and the court will upon the lunatic's application annul the contract, even though the sane party may not have had actual knowledge of the other party's mental condition.

In a case of this kind in Maryland,[6] where a lunatic had signed a transfer of bank stock without receiving a cent of consideration, he subsequently brought suit against the bank to have the transfer declared void and the stock restored to him. The Court of Appeals, deciding in the lunatic's favor, based their decision upon the distinct ground that he had received no benefit from the transfer and had been deliberately defrauded. The stock-transfer order was therefore void and of no more effect than if it had been forged; and the bank, though perfectly innocent and with no means of ascertaining the plaintiff's incapacity, was obliged to pay to him the full value of his stock.

The very recent case of Flach *vs.* Gottschalk Co., decided in 1898 (88 Md. 368) is the first complete exposition in this State of the rule as to lunatics' contracts, and fully endorses the doctrine of the English cases above mentioned. The Gottschalk Co. sued Flach, a lunatic, for the value of two barrels of whisky which had been sold to him and used by him in his business. On appeal it was held that, if the Gottschalk Co. was at the time of the sale ignorant of Flach's mental condition, it was entitled to recover on its claim. The court explained as follows the prin-

[5] Lincoln *vs.* Buckmaster, 32 Vt. 652, 663.
[6] Chew *vs.* Bank, 14 Md. 299.

ciple on which this decision rests: "It has been said that such a contract is enforced against a party *non compos*, not so much upon the idea that it possesses the legal essential of consent, but rather because, by means of an apparent contract, he has secured an advantage or benefit, which cannot be restored to the other party, and therefore it would be inequitable to permit him, or those in privity with him, to repudiate it."

From the above cases it will be seen how radically the view of lunatics' contracts in our modern law differs from that of the Roman law. There, if the consenting mind was absent, the contract became void, regardless of the loss which might thus be inflicted upon innocent parties dealing with the lunatic in good faith. Whereas now the law ignores the fundamental theory of contract, and asks whether the lunatic has received any benefit for which he ought in fairness to pay, and whether the party dealing with him was honestly ignorant of his condition. If it finds both these facts to exist, the law upholds and enforces the lunatic's contract against him. A contrary doctrine, says Lord Cranworth, "would render all ordinary dealings between man and man unsafe. How is a shop-keeper, who sells his goods, to know whether a customer is or is not of sound mind?"

This view of the lunatic's benefit, as a measure of his liability, is further illustrated by the universal rule that, for necessaries supplied to him at fair prices and in kind and quantity suited to his station in life, the lunatic will be responsible, even though the party supplying such necessaries is aware of his mental condition. This rule is based upon the obvious expediency of enabling a man to obtain the necessaries of life without difficulty, and of not exposing a lunatic to the risk of starvation or want. When the lunatic has had the benefit of such necessaries, it is only fair that he should pay for them. Upon the same principle it was held, in a New York case in 1891, that where an attorney has been employed by a lunatic in an unsuccessful attempt to resist a commission of lunacy, if the attempt was founded upon probable cause and was not frivolous or litigious, the attorney may recover compensation for his services from the lunatic's estate, and after the lunatic's death may enforce the claim against his legal representatives. The reason, in this latter case, is that it is obviously necessary for the lunatic, as well as to the interest

of the public, that he shall be able to employ counsel to represent him, when his liberty and property are at stake.

The deeds of lunatics are voidable to the same extent as their contracts, and the test of capacity to make them is the same, *i. e.*, a mind capable at the time of understanding the transaction.[7] There is, however, this difference, that whereas the invalidity of the contract by reason of lunacy may be shown in the course of any suit or proceeding, where the existence of that contract is material to the issue, a deed, being an act of greater solemnity, cannot, as a rule, be attacked collaterally, and can only be voided by an equity proceeding instituted for that express purpose.[8]

Again, where it is proposed to avoid a deed made by the lunatic, for which he has received a valuable consideration, the rule applicable to contracts that the parties must be restored to their prior condition is invoked, and the courts of a majority of States have held that the consideration must be given back.[9] In other words, the lunatic cannot "eat his cake and have it too." Some of our State courts have, however, not accepted this view.[10] It is hardly necessary to add that the right, to have a contract or deed declared void, is one which can only be exercised by the lunatic or those in privity with him. A stranger cannot set up the invalidity of the transaction, and still less can the sane contracting party object to it.

In the case of such deeds, which would be voidable as against the grantees, we are met with some doubt as to the right of third parties, who may have purchased in good faith and for value prior to their discovery of the lunacy. This question also arises with regard to the negotiable paper signed by lunatics, when, owing to an absence of consideration or to his knowledge of the lunacy, such paper would be void in the hands of the original holder. What are the rights of innocent third parties, who may have acquired the paper without notice of the maker's incapacity?

In suits on promissory notes, where the lunacy of the maker

[7] Key *vs.* Davis, 1 Md. 32; Evans *vs.* Horan, 52 Md. 602; Riley *vs.* Carter, 76 Md. 594.

[8] See Evans *vs.* Horan, 52 Md. 602, 613.

[9] Eaton *vs.* Eaton, 37 N. J. Law, 108; Morris *vs.* Railway Co., 67 Minn. 74; Carr *vs.* Holliday, 40 N. C. 167.

[10] *E. g.* Rogers *vs.* Walker, 6 Pa. St. 371.

was pleaded, it has been held in Pennsylvania, as well as by Lord Tenterden in England,[11] that such a defence was good even against an innocent indorsee; but as regards the deeds of lunatics the rules are conflicting. In New York, Iowa and North Carolina [12] a *bona-fide* purchaser of lunatic's property is protected against any attempt to hold his conveyance void. Whereas in Maine, Michigan and Indiana [13] the reverse has been held, and the lunatic has been allowed to get back his land, even as against an innocent purchaser. Since a lunatic's deed like his note can be held void only on one ground, *i. e.*, the lunatic's incapacity to bind himself, it would seem that the deed, like the promissory note, should be void for all purposes, and even though an innocent third party may have purchased the property conveyed by it. He should, on sound principle, acquire no more rights in the property than he would if his title had been derived through a forged or fraudulent conveyance. The doctrine of Maine, Michigan and Indiana seems, therefore, the sounder on this point. In Maryland it is still an open question, though the latter rule appears likely to prevail here.[14]

The contract of marriage entered into by a lunatic differs from his ordinary contracts in three important particulars: (1) Whereas the ordinary contract can be declared void only at the option of the lunatic, or of those in privity with him, a marriage is absolutely void, if either party is incapable of consent, and can be shown to be void by the sane contracting party, by the insane party after recovery, or by any person whose interest it is to have its validity tested.[15] For instance, a brother of an intestate lunatic, who had died leaving children, might prove the lunatic's insanity and legal incapacity to marry, in order to show that those children were illegitimate, and consequently not entitled to inherit the lunatic's property. Marriage being obvi-

[11] Moore *vs.* Hershey, 90 Pa. St. 196, 201; Sentance *vs.* Poole, 3 C. & P. 1; McClain *vs.* Davis, 77 Ind. 419.

[12] Valentine *vs.* Lunt, 115 N. Y. 496; Ashcraft *vs.* De Armond, 44 Iowa, 229; Odom *vs.* Riddick, 104 N. C. 515.

[13] Hovey *vs.* Hobson, 53 Me. 451; Rogers *vs.* Blackwell, 49 Mich. 192; Somers *vs.* Pumphrey, 24 Ind. 231.

[14] See Evans *vs.* Horan, 52 Md. 602, 612.

[15] State *vs.* Setzer, 97 N. C. 252; Browning *vs.* Reane, 2 Phill. E. R. 69.

ously different from ordinary contracts, in that it affects the interest of so many persons besides the contracting parties, this seems a reasonable rule. (2) It follows from this rule that the knowledge by the sane party of the mental condition of the lunatic party is not a material question in cases of marriage, as it is in those of ordinary contract. (3) Marriage not being, like an ordinary contract, voidable for lunacy at the option of the lunatic, it follows that it cannot be ratified by any course of conduct, even in a lucid interval. As was said in a Georgia case, "Marriages of persons of unsound mind are void *ab initio*. The performance of the ceremony, and continual cohabitation till death, with one in that condition will not constitute a legal marriage." Thus the mental capacity to form a marriage contract must exist at the time of the marriage ceremony, for if it be absent then, no subsequent act short of repeating the ceremony will cure the defect.[16]

The test of capacity to marry is the same as for other contracts, namely, a mental strength sufficient to understand the nature of the transaction; but this does not require a high degree of mental power, as the following cases will show:

In Kern *vs.* Kern (51 N. J. Eq. 587) a marriage was held to be good, even in the teeth of medical testimony, as to mental unsoundness, upon which the husband had been placed in an asylum. The court said: "A man may be subject to mania and medically of unsound mind, yet if the particular phase of mania had no influence upon the act brought in question, such act is not in the law invalidated. He may be an imbecile and medically of unsound mind, but if he has sufficient reason to understand the act, he is legally competent."

Again, in the famous English case of Harrod *vs.* Harrod (1 K. and J. 14) the vice-chancellor said that all that was required for a valid contract of marriage was that the parties should understand that, by that act, they had agreed to cohabit together and with no other person. He sustained in that case the validity of the marriage of a deaf-and-dumb woman, who could not write or talk; who could only be made to understand anything by

[16] Crump *vs.* Morgan, 1 Ire. Eq. 91; Ward *vs.* Dulaney, 23 Miss. 410; but this rule is questioned in 1 Bishop Mar. & Div. Sect. 140.

persons who had known her long and intimately, and who did not know enough about money to give change to her husband's customers. The judge inferred from her conduct, before and after marriage, that she knew the nature of the contract into which she had entered, and was capable of giving the necessary consent. In addition to the degree of understanding here described, it is of course necessary to any valid marriage that there should be absolutely no coercion or undue influence. Capacity to marry, so far as mental soundness is concerned, depends therefore simply on (1) freedom from coercion and (2) sufficient understanding to appreciate the nature of the act.

A few words more must be said as to undue influence. This comes into notice chiefly in connection with those milder forms of mental unsoundness which we describe as dotage or imbecility. As a rule these forms alone will not be regarded as a bar to contractual capacity. And it is only when undue influence can be proved that we hear of them as vitiating contracts.[16a] The effect of such influence, like that of unfair dealing with the lunatic, is so obviously fatal to the validity of any contract that nothing further needs to be said.

Intoxication is now treated as having the same effect as lunacy, provided it be so complete as to produce what a grandiloquent Western judge has called "complete dethronement of the reason." If only partial, it is placed on the same footing as dotage or imbecility, and is held to avoid a contract only when coercion or undue influence can also be established. Its legal effects may, therefore, be said now-a-days to form a branch of the general law of lunacy; but it is interesting to note that this view is of modern growth.

The old doctrine as to the contracts of the intoxicated was based upon a notion of public policy somewhat similar to that which produced Coke's famous rule as to the contracts of the lunatic. If it was thought impolitic to allow the insane to plead their insanity, much more was it thought unwise to allow drunkards to plead their drunkenness. Sir Joseph Jekyll, Master of the Rolls, thus stated in 1734 the reason for the rule: "The having been in drink is not any reason to relieve a man

[16a] See Cherbonnier *vs.* Evitts, 56 Md. 576.

against any deed or agreement gained from him when in those circumstances, for this were to encourage drunkenness." And he makes this single exception: "But it will be otherwise, if, through the contrivance of him who gained the deed, the party from whom such deed had been gained was drawn into drink." In other words, during the 18th century it was necessary for a man who wished to set aside an agreement made by him when drunk, to show that the other party had deliberately produced that condition.

Now, however, the deed or contract of a drunken man will be avoided, upon proof either that he was actually imposed upon, or that he was at the time of execution so drunk as not to know what he was doing or the consequences of his own acts.

In practice it seems hard to set aside a deed or contract even under this more liberal rule. For in the last two Maryland cases [17] where it has been attempted to do so, the court has held that the testimony failed to show that the intoxication was so complete as to satisfy the above test of incapacity. It is hardly necessary to say that, in cases involving insanity or drunkenness, the law presumes that sanity or sobriety exists until the contrary is shown. In other words, the burden of proof is always on the lunatic or the drunken man to establish the fact that the requisite degree of incapacity was present at the particular time in question. In the case of serious lunacy this may not be at all difficult to prove. What is difficult for the lunatic's counsel to establish is the fact that the lunacy was known to the other contracting party.

On the whole it may be said that the obstacles placed by our modern law in the path of the lunatic who wishes to avoid his deed or contract, though they promote the general safety of commercial dealings, do bear with considerable harshness on the lunatic himself. While we have abandoned Coke's rule that no man shall stultify himself, we still make it decidedly difficult for the lunatic to undo the effects of his acts, even when those acts may have been performed in a state of total incapacity. We say to the lunatic: "Your contract shall stand, unless you can clearly show that your mental weakness was known to the other

[17] Johns *vs.* Fritchey, 39 Md. 258; Hewitt's case, 55 Md. 509.

party." Where there is any loss to be borne and both parties are innocent, we say that the loss should fall upon the party who has received benefit from the contract, or that if he wishes to rescind, he must be compelled to replace the other party in his former position. It thus appears that, while we boast of having repudiated Coke's rule, we now have a rule scarcely less arbitrary than his, and one which is frankly based, as was his rule, not upon the fundamental theory of contract, but upon our notion of what public policy requires. The law applied to lunatics' marriages is, however, more logical, probably because as to them no commercial considerations have affected the law. A marriage, as we have seen, is invalid, if there be a lack of the consenting mind in either party, and the question of knowledge by the other party is immaterial. "No consent, no marriage," is now the rule, just as in Roman law the rule was, "no consent, no contract." Marriage is not, like other contracts, voidable under one set of facts, and binding under another. This great contrast, which it presents to the other contracts of lunatics may perhaps best be accounted for by the historic fact that marriage was for centuries dealt with by the ecclesiastical courts and the canon law, and was thereby brought within Roman influences from which the other contracts remained exempt.

II. *Tort.*—Having thus sketched in outline the law of lunacy and contract, I now turn to that of lunacy and tort. Of this Mr. Justice Holmes has gone so far as to say that "no general rule can be laid down about it. There is no doubt that in many cases a man may be insane, and yet perfectly capable of taking the precautions and of being influenced by the motives which the circumstances demand. But if insanity of a pronounced type exists, manifestly incapacitating the sufferer from complying with the rule which he has broken, good sense would require it to be admitted as an excuse." [18]

The reason for this criticism is that, rightly or wrongly from a logical standpoint, there can be no doubt that the law, as it now stands, does hold the lunatic responsible in damages for most of the torts which he may commit.

A good illustration of this fact is the New Hampshire case of

[18] Common Law, p. 109.

Jewell *vs.* Colby (66 N. H. 399) in which a lunatic was sued for damages for having in a burst of frenzy killed the mother of the plaintiff. Of course, this lunatic could not be indicted for murder, because the criminal intent was lacking. But since a criminal act of this sort may also be regarded as a civil wrong, or tort, the daughter and husband of the unfortunate woman brought suit for damages against the lunatic. The New Hampshire Supreme Court held that the action would lie, and that damages might be awarded to the extent of compensation, though not punitive damages, owing to the absence of malicious intent. This is a fair instance of the existing law upon this point, and certainly of the law as it exists in Maryland. In Cross *vs.* Kent (32 Md. 581) decided in 1870, a lunatic was found by the jury to have set fire to a barn worth about $700, which was totally destroyed. The court held that his estate was liable to the plaintiff to the extent of the value of the property destroyed, though not of course to punitive damages. The reasoning upon which such decisions rest is that, since in the great majority of tortious actions the good or bad intent of the person committing them is immaterial, a lunatic, though he cannot be regarded as possessing a malicious intent, should be held as fully liable as the sane person.

A tort such as the one above-mentioned, unaccompanied by bad intent, can in the case of a sane person only occur where the person was performing a negligent or unlawful act. If I discharge a gun in a city, without intention of hurting anybody, and in so doing happen to injure a passer-by, he may sue me for the tort, because while my intention was not bad, my act was unlawful. But if (as occurred in an early Massachusetts case) I raise a stick to separate two dogs engaged in a dog-fight, and in so doing accidentally strike and injure a bystander, he has no right of action against me, because the act was lawful.

Now, in the first of these cases, if we suppose a lunatic to fire a gun at random in a city and to injure a fellow citizen, the law renders that lunatic liable in damages to the extent of what will compensate for the injury committed, on the ground that, if he had been sane, his good or bad intent would not have affected the tortious character of his act, and consequently it still remains a tort, even though he may have been incapable of forming any intent whatever. On this same principle, an exception in favor

of the lunatic is made as to torts in which malicious intent is a necessary ingredient; for as the lunatic is incapable of forming such intent, he cannot commit the tort. To this class belong all injuries to the feelings or reputation, such as libel, slander, and malicious arrest or prosecution. These torts a lunatic is very properly held to be incapable of committing.

So far the law is clear enough; but there has lately appeared a decided tendency on the part of the English and American courts to take the view suggested by Justice Holmes, and by placing all tortious acts of lunatics upon the same footing as those of persons overpowered by superior force, to hold the lunatic exempt from suit.

An illustration of what is meant by superior force, in relation to sanity, is the case of the perfectly sane New Hampshire farmer, whose horses ran away with him and carried the pole of his wagon against a carved stone post on the land of a neighbor. The post was smashed and the neighbor sued the farmer for damages. But the court held he could not recover, because "no one is liable for acts done by superior force overpowering him and using him as an instrument of violence." [19]

This principle is good law as applied to the sane, and it seems to be gaining recognition as applied to the lunatic, though at present the weight of the authorities is still on the opposite side. The text-writers, however, like Justice Holmes, and Mr. Wood-Renton, are beginning to attack and undermine the foundations of the present doctrine.

The test of lunacy in tort is the same as that of lunacy in contract, *i. e.*, an utter inability at the time of the act to understand its nature and its consequences, or, in other words, to know whether the act is negligent or unlawful. Is it not then more logical to hold a lunatic, who burns down a barn, exempt from legal liability, because impelled to do the burning by a force over which he has no control, than to say that he should be held liable, because the absence of evil intent in a sane person committing a similar act would not exempt the sane person from civil liability for damages? Where the innocent intent of the tort-feasor is accompanied by the power of reasoning and of self-control, his liability ought surely to be different from that of the

[19] Brown *vs.* Collins, 53 N. H. 442; see Gault *vs.* Humes, 20 Md. 297.

lunatic, whose lack of evil intent arises from his incapacity to restrain his actions or to appreciate their unlawfulness.

In a very recent and fully argued case in New York,[20] where the master of a vessel was sued for his negligence in losing her, it appeared that in a terrific storm he had made every effort to save her, but finally, becoming insane by reason of exhaustion, he had allowed the ship to drift ashore and be wrecked. Insanity at the time the wrong was committed was therefore set up as a plea. The lower courts very reluctantly held this plea to be bad. They found that the law, as laid down by the best authorities in that State and in others, held the lunatic liable for his tortious acts of negligence, and they rendered judgment against the unfortunate master. The New York Court of Appeals reversed the judgment, but wisely did not attempt to cite authorities. It based its decision on the broad ground that the law does not expect impossibilities, and that a man insane under those circumstances should be regarded as overpowered by *vis major*, and, therefore, not responsible for the consequences of his action.

A similar view has found favor in England in the recent case of Hanbury *vs.* Hanbury (8 Times L. R. 560), where, in a suit for divorce on the ground of cruelty and desertion, it was pleaded by the defendant that the wrongful acts complained of were committed under the influence of insanity. The judge said that, if the jury found this to be a fact, and did not find those wrongful acts to have been committed in lucid intervals, he would hold the defence good. "Where complete loss of reason," he said, "seizes upon a person, I should hesitate to say that, in regard to an act committed in such a state of insanity, a plea of insanity might not be an answer."

To sum up the condition of the law in a few words: The present rule undoubtedly is that, whenever a person is injured by the act of a lunatic, he may sue and recover damages from the lunatic, unless malicious intent is a necessary ingredient of the tort. But there seems to be a well-marked tendency to depart from the harshness of this rule, and to place the tortious acts of lunatics on the same footing as those of sane persons which occur as the result of inevitable accident.

[20] Williams *vs.* Hays, 157 N. Y. 541, reversing 2 N. Y. App. Div. 183, and overruling same case in 143 N. Y. 442.

HEREDITY.

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Heredity may be said to be the continuous transition of habits-of-action along the line-of-descent.

I use the word *transition*, instead of *transmission*, to emphasize the fact that the process is a continuous *going-over*, or *going-along* of action, instead of a sending-over; that there is no interruption of the process at the passing from one generation into the next; that there is a perfect continuity of living material through all the generations from the beginning to the present; that this line of living material is not interrupted at all at the point when it takes or assumes the single cell stage; that the morphologic and physiologic activities it exhibits are possessed by the whole line-of-descent, modified, it may be, in the length of its life in those stages that we call the generations.

The line-of-descent, the phylum, is a continuous line of living material all along its length through the succeeding generations, endowed with certain habits-of-action that it inherently possesses, not to discuss how they started or were acquired; the microscopic genetic cell possesses these properties, or habits, when it connects the generations, as much as the adults on either side of it.

These habits-of-action, we may say, vary from time to time; they are not fixed and stable; they are morphologic, by which we mean they are shape-taking, and correspondingly physiologic or function-showing, by the individual himself, taken as a whole, and by the different organs and parts of his body, severally.

The habits-of-action of this long continuity of living material, the phylum, make it assume or render it capable of assuming morphologically in its succeeding stages, which we call the

generations, a certain definite form for each of its organs or parts, and for its whole, which are peculiar to that line, or phylum, and to a number of similar lines, or phyla, which collectively we call the species. In a certain sense there is a constancy in these transition modes-of-action, which is so constant that it leads us to expect always that there will be a more or less exact repetition of the modes it exhibited in the preceding generations; that like will follow like, "beget like." At the same time, if we understand and appreciate the full significance of the adjustability of the phylum through its generations to a varying environment, we know that the morphology and physiology are not altogether constant to previous type.

As soon as the phylum starts out from its genetic cell stage, it does so by proliferating into other cells which, in separate colonies, aggregate themselves according to phylal habits-of-life, into the several parts, structures and organs, which compose the whole-man—each structure or organ has, in its aggregate capacity, a function, relating to the preservation or living continuance of the whole-man; still each cell in each organ or structure preserves in considerable degree its individuality.

There is a property, which belongs to all living things, and, in different degrees, distinguishes them from things non-living; it is sentiency. This, however, is only one such property; there are self-adjustability, and the faculty of exertion for its own preservation, together with other properties or capacities for action possessed by living things, which indicate that they are living. As a result of or concomitant to sentiency we witness volition or voluntary motion; this is a property of living or sentient beings.

The individual cells, each in its own environment in the body of man, possess this property of volition, or voluntary motion. There is every grade of it, from the imperceptible capacity of the cells of the cuticle of the skin, to the highly volitional cells of the cerebral cortex. In their aggregates in the several structures and organs there are different kinds and grades of organic sentiency and self-motion in the performance of their functions; so that throughout the whole man there is every kind and grade of capacity of this kind, of the organs, ranging from that where it is hardly perceptible to the highest consciousness of the cortex.

Functional work everywhere depends upon this property. The internal equilibration of the body depends upon it. Indeed, we may well divide the functions of the nervous system into those of the lower brain and cord that relate to the equilibration of the organs within the body to each other, and those of the high-brain that relate to the equilibration of the whole man to his environment; or to the equilibration of his environment. Grades of structure pervade the man throughout, differing in the possession and exhibition of such properties. There is every conceivable grade of structure endowed with habits-of-action, that relate directly and indirectly to the living continuance of the individual and of his phylum; graded in their degrees of sentiency, of volition, etc. Not only the amoeboid movements of the blood-cells show it as they independently move and act in that fluid, but those cells, also, fixed in the structures of the organs. They volitionally appreciate and appropriate food, or decline it, and adjust themselves to the cells around them and to the impulses brought to them through the nerve-lines from distant parts. The living-motions that occur everywhere throughout the body, nutritious, morphologic and physiologic, are, in different grades according to the structure, sentient and volitional. Capacity for this kind of action determines largely the living continuance of the cells of the structures and of the whole-man. Strength and capacity of his cellular system and of his cellular brain largely determine the living continuance of the person.

These habits-of-action, capacities and capabilities, of the whole-man are in much the larger part the possessions of the phylum, or coalesced phyla, of which he in his time and generation is the exhibit; not to forget the fact, however, that they are not stable and fixed by any means, but vary themselves and are varied in the length of time. Indeed, the instability of human capacities, of all kinds, is one of the most interesting of studies.

The fact that man is sexed tends, in tracing the transition of abilities and disabilities through succeeding generations, to complicate the already complex processes still further and render the tracing and explanation of variations more difficult.

When the human phylum is in the single-cell-stage it cannot

continue its living without coalescing with a similar cell from another parent. For this reason the doubling of ancestral lines in each antecedent generation, in making a genealogical tree to represent the heredity, multiplies the difficulty of saying whence certain traits of excellence or defectiveness have come.

INSANE OR CRIMINAL?

By GEORGE J. PRESTON, M. D., Baltimore.

A case was recently tried in the criminal court of Baltimore which presented so many alluring mysteries from both medical and legal aspects that it is deemed worthy of record. The accused, Miss C., was forty years of age, and a teacher in the public schools of Baltimore. Her father, who was born in Germany, was a man of the highest integrity, widely known and greatly esteemed in Baltimore. He died at the age of 57; his wife, also German born, lived to the age of 74. Of the eight children born to this couple, but three lived to maturity. Miss C., who was one of twins, was always remarkably healthy. She passed through the public schools, and finally graduated from the normal school. At the age of fourteen she went to Germany, where she remained for a year and a half. She began to teach when she was eighteen, and had been teaching steadily up to the time of her arrest. As a teacher she was efficient, faithful, and unusually popular. During her twenty odd years as a teacher in the public schools, she was, of course, known to a large number of people, and yet her character and life appear to have been irreproachable. I had many interviews with her, and found her an exceedingly agreeable conversationalist, well educated, and possessing a varied fund of information. Her manner was modest, and free from embarrassment or affectation. Her memory was remarkably retentive and accurate. She was a member of a prominent church in this city, and took great interest in church matters and was an officer in the Sunday-school.

From these facts may be gleaned an idea of Miss C.'s family and personal history, her relations to the community in which she lived for more than forty years, and her personal traits. Now let me present a brief resume of the facts that led to her arrest. In relating them I use the notes taken during many in-

terviews when she told her story to me personally. Some six or eight years ago, so her story runs, while engaged in translating a scientific book, she was brought into relation with certain persons who had a scheme to publish leaflets to be used mainly in schools. Writers and artists were to form this company, and the leaflets were to be published and sold. She represented that this scheme was carried out and became phenomenally successful. A department was added to this, after a time, to import and distribute kindergarten supplies. The offices of the company were in New York, Boston and Denver. A woman, whose name she gave, was the president of the company, and Miss C. said that she had often seen her, and regularly corresponded with her. Miss C. stated that she had put about a thousand dollars, that she had saved, into this scheme and receiving such handsome dividends had spoken to her friends about it. She did not, she said, solicit subscriptions, but when her friends heard of it, they besought her to get stock for them. She accordingly received her friends' money and issued certificates of stock therefor. It may be said that the certificates of stock which she issued to her friends were not engraved but were simply typewritten. During a period of six or seven years there passed through her hands in this manner something like $150,000. Of this large amount about one-half was paid back as dividends (15 to 20 per cent annually), and to redeem stock, leaving about $75,000 unaccounted for. The remainder, she said, continued invested in the concerns above alluded to, and would surely be repaid. She was arrested in July, 1900, on the charge of obtaining money under false pretenses, at the instance of two persons who held certificates of stock in the company, and wanted their money back. After a preliminary hearing she was released on bail.

Such is a very brief outline of the facts as related by Miss C. Now for an analysis of these statements with some comments upon them. There is no doubt of the fact that Miss C. actually obtained this money and paid back as dividends about one-half of it. A diversion might be made here as to the credulity and gullibility of people who intrusted such large sums, as many of them did, to a woman destitute of business experience, without any sufficient guaranty, but this is a sociological question apart

from the present inquiry. Miss C. kept no books, but from memory and memoranda, furnished a fairly accurate list of the money received and expended, which showed that there remained an indebtedness of some $75,000 to be accounted for. What became of this large sum of money? She assured me again and again, as she also did her counsel, that this money had been paid over to the "company." She would never give the address of the president of the supposed company, or the exact location of the offices in any one of the three cities where they were said to be. Many times I pressed her for more definite information, but she absolutely refused to give it. I said to her, for example, "Miss C., do you not know that if you can prove that this is a genuine business transaction, it would be regarded only as an unfortunate speculation and that you could not be held liable, while on the other hand if you give no information you will go to the penitentiary?" To which she would invariably reply, "Yes, I know that, but I do not care if I do go to the penitentiary, I only want to pay back the money. If they would only wait, every cent will be returned. If people could trust me six months ago, why cannot they do so now?" The only reason she ever gave me for not revealing the addresses of the offices of the company was that the company had all the business it wanted, and did not care for publicity. Her whole manner indicated an absolute belief and confidence in the return of the money. Her counsel, one of the most distinguished criminal lawyers that Baltimore has ever produced, told me that to him she seemed absolutely sure of the ultimate return of the money. Time and again she went with her creditors to banks in the city, assuring them that a large sum of money was there, only to be met by the surprised denial of the teller. She even went to her counsel and said that she had $800 and asked whether she should pay it back. Upon being told to bring the money to counsel's office, she said she would, but returned the next day to say that she had given it to a lawyer instead, to lock up for her in his safe. This it need hardly be said was false. She insisted so strenuously that her trial be postponed from time to time that this was actually done in several instances. It might be added that before counsel had been provided for her, she went to the State's Attorney and told the

story given above. She could show no receipts for the money she claimed to have paid to the supposed company, and would not say, except in a vague way how the money was paid, "sometimes in cash, sometimes in drafts." No returned checks were ever discovered. In her anxiety to delay the trial she went so far as to send bogus telegrams from New York and Chicago, signed by the supposed president of the company urging its postponement.

What became of the money? That she did not use it herself was abundantly proven. She lived in the most simple manner; her dress was always plain, she wore no jewelry, did not entertain, and had no expensive tastes. Her salary as a teacher was ample for her support. Yet in a few years $75,000 disappeared as completely as if it had been burned and the ashes scattered to the four winds. The doctrine of "chercher la femme" properly modified, was applied with no definite results. She lived a simple life, with no admirers, certainly no lovers. I frequently questioned her closely about the possible use of the money. "How would it be possible" she would say, "for me to have been so intimate with any person as to give away such large sums of money without people knowing it?" And I was forced, from my knowledge of the facts, to admit the truth of this proposition. Or again when I told her that I thought that she had hidden the money away, her answer would be "Where could I have hidden it?" In short the use to which this money was put remains a profound mystery. In the annals of criminology the disappearance of such a large sum of money, with no rational explanation of its use is to say the least very unusual. In this particular case I thought often of the possibility of Miss C. having been the dupe of some unusually skillful operator or the victim of an unscrupulous lover. No facts, however, were forthcoming to substantiate this theory. At no time did Miss C. manifest any emotion, or show the slightest fear of the consequences of her actions. She spoke of going to the penitentiary with the utmost equanimity. She knew, of course, that the repeated examinations of her, made by alienists were for the purpose of eliciting symptoms of insanity. She also fully realized the fact that the only possible door of escape was into an insane asylum. Yet she besought me several times, and also wrote to

me not to set up the plea of insanity. The reason she gave was, that if she was found insane, she would be debarred from the opportunity of making money by her pen; that no publisher would accept manuscript from an asylum. When I told her that she had no literary talent or experience, and could not make any money by writing, she instanced the cases of Sir Walter Scott, Kipling and other celebrities.

The story she told on the witness stand was substantially the same as has been related, except the interweaving of more details. During the course of the trial she was entirely composed, laughing now and then at what seemed to her ludicrous statements, and exhibiting entire indifference to her fate. My testimony, and that of a distinguished alienist of this city, was mainly to the effect that our examinations of Miss C. revealed no trace of mental unsoundness, but that taking the whole facts of the case into consideration, Miss C.'s actions might be accounted for by the existence of an insane delusion. The jury found her guilty, and the judge sentenced her to five years in the penitentiary. To sum up the case: a woman of good antecedents, carefully brought up, of excellent education and unblemished character, a successful and popular teacher, an affectionate and considerate daughter and sister, holding a position which gave her ample support, living a simple unostentatious life, persuaded a large number of people to subscribe to a scheme which was purely fictitious, collecting about $150,000, of which amount $75,000 remains unaccounted for, while the most careful scrutiny fails to reveal how she has spent a cent of the money; absolute reticence as to the disposal of the money, in spite of the fact that the penitentiary stared her in the face, no evidence of any distinct delusions, and finally, even after conviction, an apparent implicit belief in the return of the money. Was she simply the dupe of designing persons, or was she insane? Who can tell?

DEATH OF AN INSANE MAN FROM FRACTURE OF SKULL AND HEMORRHAGE OF THE BRAIN; SKULL ABNORMALLY THIN.

By A. R. MOULTON, M. D.,

Pennsylvania Hospital for Insane, Philadelphia.

Mr. L., aged fifty-nine years, married, a well-educated farmer and business man, who had been intemperate for some years, was admitted to the Pennsylvania Hospital for the Insane in the autumn of 1900.

It was stated by a member of his family that the patient had appeared changed since the previous March; that he had been wakeful and restless; that his power of self-control had been lessening; that he had been abusive and threatening; and that he had developed increasing delusions of wealth and grandeur. He was brought to the hospital by his friends who had led him to believe that they were conducting him to the University of Pennsylvania, where he could have analyzed certain specimens of rock that he had found on his land, and which he thought contained a very valuable mineral. Upon being informed that he was in a hospital he became very excited for a short time. He was inclined to have argumentative disputes with other patients, and upon several occasions he was violent to one gentleman in particular. At times he used vulgar language in the presence of women nurses. He was much engrossed with the idea that he would become immensely wealthy from his landed interests and the development of his mineral deposits. When indoors he spent many hours in what he called "drawing," which consisted of making very indifferent copies of pictures hanging on the wall. He tried to solve newspaper puzzles, and he addressed a letter to a paper applying for the position of director of the puzzle department.

His mental reflexes were acute, and his tendon and pupillary

reflexes were normal. About a month after his admission, during the visit of a member of his family, he became highly excited and used profane and threatening language, but returned to the ward without making any resistance. Three days later he once remarked that he was dizzy, but he continued his practice of copying engravings, and he retired at 9.30 P. M. as usual. The following morning—thirty-two days after his admission—he was found by the attendant dead on the floor of his room beside his bed. He was lying on his back with his head towards the foot of the bed; the sheets were partly on the bed and partly around his body and legs; his drawers were slipped down about his ankles.

The coroner's physician performed an autopsy. There were two slight brush bruises—one on the right shoulder and one over the left cardiac region, evidently produced by a fall. There was ecchymosis in the dependent portions of the scalp and nape of the neck. On removing the scalp there was an escape of fluid blood from the tissues, and oozing from the nutrient arteries. The skull was very thin in areas, especially the floor of the posterior fossa and at the sides of the head above and behind the external auditory meatus, so that a finger could readily be pushed through the substance of the bone, which varied from 2/100 to 4/100 of an inch in thickness. The petrous portion of the temporal bones was like candy in brittleness. The base of the skull showed two foci of fracture radiating from the occipital fossae to the occipital and parietal sutures, and anteriorly to the petrous portions of the temporal bones and into the foramen magnum through the surrounding ring of thick bone. The vault of the cranium was fairly well developed, with fairly thick wall, but showing the same brittleness. The membranes were intensely injected, but showed no inflammatory change. Large clots of blood, not organized, covered the left frontal region and right parietal and occipital regions. The left hemisphere of the cerebellum showed an area of degeneration about the size of a walnut. The left frontal lobe showed a like area of degeneration involving the gray matter, and extending to a portion of the underlying white matter. The arteries of the entire cerebrum and cerebellum showed atheromatous change. The cerebellar vessels were much engorged, and there were many punc-

tate hemorrhages. The lungs were crepitant. The heart was anaemic, and contained a small quantity of fluid blood; the valves were competent. The aorta showed a ring of atheromatous plates at the arch. The kidneys showed many small punctate cysts; the cortical substance, which was somewhat narrowed, was engorged. The pancreas was fatty. The liver showed beginning fibroid degeneration. The bladder contained a small quantity of urine. Death was due to hemorrhage of the brain following fracture of the skull.

It is presumed that this patient had a desire to urinate, and in getting up became entangled in the bed clothing and was tripped by his drawers, which, as already stated, were down about his ankles. The chamber vessel, standing at the foot of the bed, had not been used.

The skull of this patient was a most unusual one, much thinner and more brittle than any I have ever seen. The thin portions were as frail as an egg-shell, and fine print could be easily read through those areas. On account of the rarity of such a case and its meaning to physicians who are engaged in the care of the insane, I deem it important, and therefore place it on record.

THE RELATION OF MENTAL CONTENT TO NERVOUS ACTIVITY.[1]

By E. B. DELABARRE, Ph. D.,

Professor of Psychology in Brown University.

In presenting to you to-day the time-worn problem of the relation between the contents of our conscious life and the activities that occur in the neural mechanism, I am calling to your attention a matter in regard to which most of you have thought more or less, and many of you have developed decided opinions. The solution that I shall present is one to which probably most students of the human body incline, and it will lack therefore any large degree of novelty for you. It is not improbable, however, that in these days when the problems of science have grown so complex that each is fully occupied with those included in his own particular professional field and has little time to devote to the researches and conclusions of his neighbor—it is not improbable that, whatever views you yourselves may have reached, you are not aware of the attitude that modern psychology is adopting in regard to these same problems. Most of you, I suppose, received your collegiate training in the days when psychology, so far as it existed at all, was still a subdivision of philosophy and was taught by the professional theologian who was president of the college; or when it at least still bore largely the vestiges of its early alliance with theology. In those days much was said about the soul or mind and its powers and faculties, and little of the dependence of mental upon bodily process. But now that psychology has broken away from the older traditions and speculations, and is substituting careful research and actual evidence for baseless theory, its attitude toward these questions has changed. The difference in attitude can be most clearly indicated by a discussion of

[1] Read before the Rhode Island Medical Society, March 7, 1901.

the problem that is of most fundamental importance for the systematic study of mental phenomena. In dealing with it, I shall therefore be showing to the best advantage what modern psychology is like; and at the same time I shall be touching upon matters that have a large importance for medical science also.

There are two possible positions that may be taken in regard to mental processes, as in regard to all the other processes of nature. Aside from a refuge in Agnosticism, one must hold either that these processes are wholly subject to definite, unvarying, mechanical law; or that in whole or in part they are independent of law. We call those theories deterministic that hold to the reign of law without exception in every process; and indeterministic those of the opposite type. Both Determinism and Indeterminism have taken various forms in psychology. Their most important representatives however are the indeterministic theory of Interaction, and the deterministic theory of Concomitance or of Psychophysical Parallelism.

The theory of Interaction is the one that arises most easily and naturally. It is practically the way in which every man who is not a special student of these problems interprets the phenomena of his mental life. It embodies therefore the view of what we ordinarily call "common-sense." In its most usual form it believes in the following statements: The mind or soul is a real spiritual being. Thoughts, feelings, perceptions, decisions, and all else that we call mental content can exist only by being contained within a mind. To some extent, as in the case of sensations, the mental content is dependent on the activities of the brain. To some extent, particularly in the case of the will, the mind can act on the brain and through it determine what goes on in the body. In some respects the mind acts independently of the body, and exercises control over its own content. There is thus an interaction between mind and brain, either being capable of causing changes in the other; and there is also in some ways complete independence of the one with respect to the other. The mind itself possesses various faculties or powers, preeminent among which is its will, through which it exercises its influence upon its own content and upon the bodily movements. And this will is free, subject to no law,

causeless, capable of choosing one alternative or another, without any determining influence.

In opposition to this popular conception the deterministic views have gradually arisen. A large degree of the progress made by every branch of science has been due to its substitution of definite physical causality wherever possible in place of the earlier believed-in mental agencies. In every division of physical science we find to-day the complete adoption of this principle. Even in biology the triumph of physico-chemical law, acting without exception in accord with the principle of conservation of energy, as the sole explanation of every organic structure and process, is complete. The physiologist regards every bodily organ as having originated through definite mechanically acting causes, whose nature is summed up in the doctrine of evolution; and as carrying out all its functions also in a definite mechanical way. Even the brain cannot be considered as exempt from this subservience to the laws of the physical world, of which it forms a part. But if now the psychologist claims that interaction is true, in so far as physical energy can be used up in producing mental effects, and in so far as the mind can cause changes to take place in the physical world, just so far does he claim that the law of conservation of physical energy is not true and the great conception of a physical world wherein all that happens is due to physical laws of causation is inapplicable. It is natural that the advance of science should tend to remove this opposition between the physicists and the psychologists. Either the former must concede that their physical laws are not without exceptions; or the latter must bring their theories of mental phenomena into complete accord with the idea of an exclusively physical causation of all nervous processes. Which of these alternatives is adopted must depend largely on whether the physiologist can satisfactorily explain all the activities of the nervous system as due to the working of mechanical causes alone. Certainly great progress has been made in demonstrating the adequacy of this point of view. The physiologist can rightly claim that however incomplete our knowledge may be in regard to the details of nervous process, yet two things are certain: their mechanical explanation is in accord with the method that has

led to progress in all other branches of science and is responsible for all the advance that has been made in physiology; and there is absolutely no valid argument against its adoption. So far as our knowledge yet extends, every process of the body can be mechanically explained.

The psychologist evidently has no right without unassailable reasons to dictate to the physicist opinions concerning the physical, including the organic, world. The determinist does not believe that such reasons exist. He holds that there is absolutely no evidence in favor of interaction; and that an unprejudiced examination of mental phenomena results in a view of them that leaves the complete causality of the physical phenomena untouched. The theory of concomitance therefore, which is the most plausible of the deterministic psychological theories, adopts the following position: We have no evidence of the existence of minds or souls in the sense of spiritual beings with power to contain or to do anything. All that our introspection reveals is that which we call mental phenomena or mental content; namely, our perceptions, ideas, feelings, decisions. The mind that we feel to exist and to contain all the rest is never really anything more than a collection of feelings, derived from a bodily origin, like the rest. Our consciousness of the existence of the self as something different from its content is illusory. The only way in which we are justified in speaking of the mind is as the sum total of our personal mental phenomena. These mental phenomena never affect in any way the activity of the brain. That goes on according to its own physical laws. The mental phenomena simply accompany the physical, without in any way interfering with the latter. The two are connected together according to definite laws of concomitant appearance, but there is no causal relationship between the two. Every fact of our consciousness and of our action is dependent upon the occurrence of a definite invariable molecular condition in the brain. Every slightest change in thought or feeling indicates a corresponding change in the accompanying cerebral conditions. The cerebral facts themselves are physical structures whose changes take place without exception in accordance with mechanical physical law. Even the phenomena of choice are not exempt from this determinism. We

have no free will in the old sense, whereby under identical circumstances different choices may result. We have freedom only in the sense that our actions are not subject wholly to external compulsion, but depend also largely on our own internal structure. The mind does nothing really. It is not the mind that remembers and thinks and decides; but rather, the mental facts of memory, thought and choice occur in concomitant dependence on physically determined brain processes. Given a certain individual, at a certain moment of his experience, with certain motives occurring to him through the laws of association, and with a definite external environment, and his mental conflict, his weighing of motives, his final decision, can take but one course. No change in his process of deliberation and no different choice can take place without some change in the determining conditions, external or internal. There is truth in our feeling that under given conditions we may choose either alternative we prefer, and that, the choice once made, we might have chosen otherwise if we had wished. But we could not have chosen otherwise unless we had wished otherwise; and a change in the wish would have been a change in the internal determining conditions of a sort that is not dependent on our will. We could not have wished otherwise unless the external circumstances, the suggested motives and the nature of our feelings attaching to them, had been different. We think that our own voluntary wishes have no causes but ourselves, simply because the processes that really originate them are largely unconscious. They have their causal roots deep amid the subconscious and therefore untraceable forms of mental life. But our inability to trace their source does not indicate that they have none. Psychology is continually searching out more and more clearly the causal origins of our feelings and preferences, and showing them all as fully determined by our inheritance and experience, and thus in turn determining all our choices and conduct.

This theory of the complete determinism of all mental life as well as of all physical activity is accepted by the large majority of the psychologists of the present day. A few, like James, mainly for sentimental or for ethical reasons, still hold to a belief in interaction to a limited degree. But they are in a hope-

less and constantly decreasing minority. As interaction is the theory of "common-sense," so concomitance or parallelism is the theory of that organized, more carefully observing and corrected common-sense called science. Between these two forms of the theory, concomitance and parallelism, there exist minor, but for our purposes, unimportant differences, which need not concern us. They would both agree in the position just outlined, which I may now briefly sum up: Mind as a being that can act does not exist. The mind as we know it is the organized sum total of the mental phenomena connected with an individual organic body. The mental phenomena and their organization are concomitantly dependent on or parallel with physically determined cerebral processes. For every psychosis there is a concomitant neurosis. The neuroses are physical and subject to physical law alone.

There is another important difference between the older and the newer explanations of mental phenomena. The newer view holds that every mental fact is nothing more than a mass of closely organized sensations. A perception of an object, a feeling of self-existence, a thought, an ideal, an emotional feeling, a preference or choice—all these contain no other elements than those derived from our senses, closely associated into compact groups by our sense-experience. These groups are given the different names I have just enumerated, according to the variety of sensations that enter into them, and according to their proportion of actually present or associatively revived sensation. But imagination can arouse, thought can devise, reason can formulate no new products whose material is not wholly furnished by the senses, and whose combination is not entirely dependent on the laws of brain activity. The older view on the other hand believed not only that the mind has independent powers of its own, but also that it contains a variety of contents, called intuitions, whose origin is due not to sense but to an innate inheritance or to the clearer insight of a superior faculty of reason. Among the intuitions were included the ideas of space, of time, of cause, of God. With the knowledge accessible to the earlier thinkers it was hardly possible to escape this view. But we can now see how it is possible to regard them also as combinations of sense-experience. The

study of mental evolution has been of the greatest service in tracing their gradual origin and growth. An increased knowledge of the body and its activities has given us a better acquaintance with their mechanism. Of the latter type, the discoveries which have been of the greatest influence and value in establishing the new conceptions seem to me to be the following: First, the growth of the idea that, given the structure, the connections and the state of nutrition of the brain-cells, all their activities can be accounted for by the sensory stimulations that reach them and the passage of energy among them along the connecting pathways that offer least resistance. Second, the fact that the brain-cells, whether they are stimulated by sensory or by associative excitations, do not act isolatedly but in groups that have been connected into close systems through the associations of actual experience. The mental concomitants of these cerebral groups are the "apperceptive masses," which, according to the manner of their arousal, appear in consciousness as perceptions or as ideas. Their component parts are so closely organized and welded together that our introspection can never fully separate and recognize them. Third, the enormous and fruitful extension of the idea that the body is essentially a complex reacting mechanism. Besides the ordinary and well-known reflex actions, the automatic actions of instinct and imitation and the externally visible expressions of the emotions, there exist a host of other bodily adjustments determined by reflex response to sensory stimulation. One may even claim that there is no form of cerebral activity, and hence no kind of consciousness, that does not involve its own particular type of motor adjustment. Fourth, the discovery that in addition to the ordinary senses popularly recognized, there exist sensations corresponding to the degree of muscular contraction. These muscular sensations enable the adjustments just spoken of to obtain representation in consciousness; and they are responsible for some of the most important of our mental contents. One peculiarity of sensations determined by muscular activity is that they are rarely recognized as originating in the muscles, or even in the body at all, and hence are often regarded as purely mental properties. In order that a sensation may be known as a sensation and localized as originating in some particular part of

the body, there are requisite certain conditions which it would lead me too far to discuss at present, but which are regularly absent from the muscular sensations. When this is true, however, these latter cannot escape being regarded as having nothing to do with the body at all, but rather as being pure intuitions of the mind. Among the feelings that probably owe their origin largely to this source are those of space-perception, of duration, of mental effort, of self-existence, of relation between things or thoughts, and of emotion. Fifth and finally, the recognition of the fact that our consciousness at any moment consists not only of those mental states of which we are clearly aware, but also of a great mass of fainter feelings and ideas which are so complex, confused and indefinite that we cannot separate them out individually at all, but only recognize them all together as the feeling of mood or of self of the moment.

The way in which these principles aid in giving a scientific explanation to our mental life can best be shown by an examination of the details of their application to a few of our mental constructions. I will take for my first example the visual perception of space. Our visual sense itself gives us only sensations of color—I include of course sensations of black, white and grey under that term. The recognition of the color as forming part of a spatially extended object cannot be due to the retinal excitations alone. But since space itself is a mere emptiness it cannot in any way, it would seem, affect any sense-organ. How then do we get any knowledge of it? The older view of psychology could only say: Space is an intuition of the mind. When the eye is affected, the mind adds this spatial intuition to the color sensations, and the result of the combination is the perception of the extended colored object. We say now however: To receive clear sensations of color, we must adjust our eyes carefully to the particular direction and distance of the object attended to. Our past experience has closely associated these particular muscular adjustments with other complicated experiences of seeing and handling objects. The total perception of the object now corresponds to the activity of an organized group of brain-cells, aroused by the color and muscular sensations, and including these together with the closely associated elements from previous experience. The spatial part of

it is given by the muscular sensations, interpreted through the associations they have formed. This explanation is entirely adequate, without any appeal to intuitions; and its truth is clearly established by recent researches. No better proof can be given than is afforded by some recent experiments in our own laboratory at Brown University. In ordinary vision the direction, convergence and accommodation of the eyes are maintained, or their movements determined, by appropriate contractions of the various muscles without any considerable degree of unnecessary strain. But strains of various degree can be introduced, balanced by corresponding strains in the antagonistic muscles. Our researches have established the fact that, without any change in the adjustment of the eye, its varying strains lead to corresponding differences in the spatial perception of distance, direction, length, etc. In other words, the muscular sensations of the eye appear in consciousness not as muscular sensations but as spatial magnitudes.

Also composed of muscular sensations are our feelings of what we regard as purely mental effort. We cannot make a strong mental effort to attend, to think, or to will, without at the same time strongly contracting certain muscles. The breathing becomes tense; the chest and neck are stiffened; the forehead is wrinkled. Suppress these muscular efforts, and the mental effort disappears with them. We do not therefore ever really feel the mind exerting itself, but we feel instead the strains of bodily muscles, and misinterpret them.

To the older view, the emotions seemed peculiarly to be modifications of the mental self alone. They are now explained as a closely knit mass of sensations, mainly muscular and organic. No emotion exists without its corresponding bodily expression. It is ordinarily held that the emotion first affects the mind, and then causes its expression. More recent research has led us to reverse this relation. The expression of an emotion is a reflex adjustment of the organism to the total brain activity of the moment. It has originated in some activity once useful to our ancestors, perhaps far down in the animal scale, which now exists only as a useless survival; or it is still a useful adjustment of our inner activities fitted to aid an advantageous dealing with the objects that affect us; or it is a stimulation of the respira-

tory and circulatory apparatus in a way adapted to secure the proper nutrition of the active parts of the nervous and muscular systems and thus to aid our attention and activity. In any case it occurs as a mechanical reflex. When the expression takes place, it causes an influx of muscular sensations of a particular type, and these sensations, massed together and not recognized as that which they really are, constitute the emotion. The emotion is thus not the cause of the expression, but the expression is the cause of the emotion. Suppress the expression, and the emotion disappears. The fact that we can conceal our emotions by practice is no argument against this fact; for we must remember that the outwardly visible expression is only a small part of the total expression, which is constituted also to a large extent by inner changes not subject to voluntary control. Modify the expression and the emotion changes. We may still call it by the same name; but there are infinite shades of every emotion, each corresponding to a different expression. It is true that a given emotion may be felt before it is fully expressed and may thus seem to precede the expression, But both emotion and expression usually develop by gradual stages; and the emotion as it is felt at a given moment is the counterpart of so much of the expression as has thus far developed. The next stage of the expression is introduced by the mechanical activity of the changing brain process, instead of by the already developed emotion itself, and thus in turn introduces the next stage of the emotion. This theory has been much discussed of late by advocates of both of the opposing views. There has been advanced however no serious objection to its adoption. On the contrary, the fuller development of details that has resulted has established it all the more firmly.

I might continue almost indefinitely to give examples of the modern deterministic interpretation of our mental life. In particular the temptation is strong to dwell upon the phenomena of choice, and to show how they also can be satisfactorily accounted for in all their details by the theory of concomitance. But I have already at the beginning briefly indicated the manner in which they are to be explained, and I must turn my attention to a few of the most important objections that have been

urged against the theory. I will confine myself to three; one a practical, one an ethical, and one a metaphysical.

It may be said that we have a mass of incontrovertible proofs that the mind does really influence the body. Not only do we directly feel the truth of this in every act of will, but our very reflex acts are largely in response to sensations; and the facts of hypnotic suggestion, of mental cures and the like give constant evidence that the mind has an enormous control over the bodily activities. Yet in spite of the evidence, I believe that we can speak only figuratively and popularly, not literally and scientifically, of the influence of the mind on the body. I have already indicated that the bodily movements which we call voluntary can all be regarded as the results of complex mechanical causes. The reflex actions result of course not from the sensations as mental facts, but from the stimulation of nervous cells by currents of physical energy from the sense-organs. When a person is induced to perform actions through hypnotic suggestion, it is true that the words of the hypnotizer introduce appropriate perceptions and ideas into the consciousness of the subject. But it is not these that cause the physical result. The spoken word itself is a physical process; it arouses other physical processes in the organ of hearing and in corresponding cells of the brain; these sensory excitations excite appropriate groups of organized cells which the associative processes of previous excitations have united firmly with them; and it is the activity of these cell-groups that accounts on the one hand for the concomitant consciousness and on the other for the resulting bodily process. Similar statements apply to mental cures. They must always be confined to such as can be brought about through the influence which brain activity can exert on such processes as nutrition and secretion. The brain activity, induced mechanically by the laws of sensory stimulation and of association, effects the cure. The mental condition is simply an indication that the brain activity is present.

A striking illustration of the way in which the assumption of a mind and its supposed powers is used to explain difficult phenomena is afforded by recent theories in regard to the curious so-called secondary personalities. The facts are well known and I will not attempt to repeat them. It is almost universally

assumed that they can be explained only by the existence of two separate minds in connection with the one brain. But if the theory of concomitance is true, an appeal to a mind never explains any phenomenon, normal or abnormal, mental or physical. It is my belief that there are never two separate consciousnesses connected with the one brain. There is only the one series of conscious states, with their varying degrees of clearness. But as we have seen, the brain-cells are organized into groups; and these groups are organized into systems and thus tend to arouse each other through the paths of connection between them. Usually all the systems that develop are connected together more or less closely and intricately into one total system, whose activities underlie the mental life of the individual. But it may happen under certain unusual conditions that besides the system that subserves the person's ordinary conscious life, one or more other systems may be woven together by the subconscious activities of the brain. Such subconscious associative processes are numerous in every normal individual. They may, as I have said, give rise to closely organized systems separate from that of the usual conscious life. When this occurs, the usually subconscious system may under exceptional circumstances usurp the place of the normal system and thus give rise to the so-called alternating personalities. But the new personality is only a different consciousness of the same mind or individual in exactly the same sense that my consciousness now is different from my consciousness of an hour ago. The only reason why they seem to be two separate minds is that there are few or no cross-paths between the two systems. It has been claimed however that there is evidence that the two separate consciousnesses coexist. One may engage the normal consciousness in conversation, and at the same time hold conversation with the secondary personality by means of automatic writing. When this occurs, the two brain systems are indeed active together and controlling different methods of expression simultaneously. But both systems perform their activities according to the mechanical laws of brain activity. There is absolutely no evidence and no reason to assume that when the secondary system answers questions intelligently, remembers, reasons and argues it does it otherwise than mechanically

or with any clear consciousness attending it. All the clear consciousness belongs then to the more active main system. If any consciousness attends the activity of the secondary system it too forms a part of the total consciousness of the one individual; but is not a part of his clear and recognizable consciousness. It contributes only to those vague, subliminal, indefinite states, what James calls the fringe of consciousness, which as I have said normally form a faint and undistinguished part of every conscious moment of every one of us. To call these phenomena the result of separately organized and active systems of brain-cells is rational and all that is demanded. To call them really separate minds or personalities is strictly untrue, and helps only popularly and figuratively.

The second objection that I have to meet is an ethical one, and has been in fact the most serious obstacle to the adoption of a belief in determinism. If all our acts are causally determined, it is said, then we cannot ourselves be responsible for them; and if so, then there can be no difference between good and bad, no real morality. An adoption of the theory of determinism would lead to moral deterioration in conduct. This argument is full of fallacy. There is a difference between good and bad, dependent not on our manner of choice, but on the kinds of consequences to which actions lead. There is as a matter of fact a moral law that through the very determinism of the will incites to a general preference for and endeavor toward the results of good actions, that would not be subject to change in consequence of our special theories as to the nature of the choosing process. There is responsibility in the sense that we must accept the consequence of our actions, as they are brought about by the reactions upon us of nature and of the social body; and there never could be responsibility of any other kind. This has been clearly pointed out recently by Sutherland, in his discussion on the "Origin and Growth of the Moral Instinct." The old conception of a causeless free will is utterly inconsistent with a belief in moral responsibility, as Fullerton has shown. Determinism is not inconsistent with a belief in freedom, in the sense that our actions are not compelled by an external fate but are determined by our own nature. The fact that our own nature works not in a causeless and lawless man-

ner, but consistently and lawfully, enlarges instead of degrading our conception of the dignity and worth of man. Determinism is not fatalism, and it not only furnishes the only possible basis for ethical theory, but also gives us the only possible basis for confidence in the continuous moral progress of mankind.

The metaphysical objection is that this theory of the dependence of mental states on physical processes is pure materialism with all its displeasing implications. Such a view arises from an inadequate understanding of the province and the assertions of science. Physical science is not materialism just because it describes the physical phenomena and finds them occurring according to definite law. Nor is mental science materialistic because it finds law and not chance in all mental happenings. Materialism is a metaphysical view that regards the true forces and causes of the world not only as mechanical and law-abiding, but as dead, unconscious, irresponsible. Idealism is another metaphysical theory that believes that all the true facts and forces in the world, whether they seem to us physical or mental, are really all conscious and aiming toward clearly foreseen ideal ends. Science commits itself to neither of these views, nor to any of the many others that have been advanced. Its conclusions are stated in such a manner that they will remain true, whatever philosophy may ultimately decide as to the true metaphysical theory. I myself, though a determinist and a supporter of the theory of concomitance, am yet philosophically a believer in idealism; and I do not find the two inconsistent. On the contrary, idealism as well as materialism may believe that the conscious activities which it believes are the only true ultimate realities work toward their ends not fitfully and inconsistently but in a consistent manner that may be expressed in the invariable laws of nature and of mind.

Although our knowlege is already sufficient to enable us to assert with confidence the adequacy of the theory of concomitance, yet we are still far from a complete knowledge of the details of bodily activity and of the connection of consciousness with it. Psychology must wait upon the slow progress of physiology for the solution of many of its problems. The human body is an enormously complicated mechanism, and it will be long before we have completely unraveled all the intricacies

of its working. I have myself been particularly impatient at the insufficiency of its investigations in connection with some researches that I have made into the mental effects of Cannabis Indica. It is easy enough to describe accurately the mental phenomena that occurred. But their systematization and explanation is impossible from an examination of the mental facts themselves. It is essential that one should first know the nature of its physiological effect. Does it affect directly the sense-organs, or the sensory pathways; the spinal cord, the medulla, the cerebellum or the cerebral centers? Even though we know that it certainly affects the latter, may it not affect one or more of the others also? What would be the exact effect of its action on each in its different parts, that might give us a clue to the localities and successions of its effects? In what way does it produce its particular effects on the circulatory system—through action on the heart, or on the arteries; and if the latter, on which ones and in what order? Is its influence a stimulating or an inhibitory one? I find no satisfactory answer to these questions in the physiologies, nor can I deduce one completely from the mental phenomena themselves. Yet I believe that were the physiological problems solved, I should find in them a complete solution of the laws of its mental effects. The same is true, I believe, of the composition and origin of every mental state. The final explanation of them all must be found in the law of their concomitance with physiological processes.

The substitution of a belief in causal law for a belief in freely choosing and incalculable mental powers has been the condition of progress in every science. Always objection has been made in the name of common-sense observation and of morality to every extension of this principle. But always the principle has triumphed without involving the unfortunate consequences predicted, and to the great advantage and progress of mankind. The same truth will hold in regard to psychology. The reduction of the phenomena it studies to definite law, the triumph of the theory of concomitance, will be found not to involve a degradation of man and a deterioration of morals, but on the contrary an enormous advantage. Our understanding of our mental life will be advanced. Our control over it in ourselves and in our fellows will greatly increase. We will know better

what we are and of what we are capable, and will thus be able to direct our endeavors to better advantage. The principle has already shown its value as a stimulus and guide to further research. And I cannot help thinking that along with these advantages to the psychologist and to practical activity will be included a distinct gain to your own science of medicine. You have to consider not only the laws of the effect of medicaments and manipulations on the human system, but also the so-called influences of the mind on its activities. If these can be expressed in terms of invariable law, leaving nothing to a causeless and incalculable will, if their exact nature and limitations can be discovered, you will gain largely in your control over bodily functions and your scientific methods will displace all the vague and mistaken methods, combining a small kernel of truth in the midst of much harmful error, that are so widespread at the present day. This advantage to yourselves, together with corresponding advantages to psychology, to physiology, to science in general and to practical life, can, I repeat, arise only through the continual growth of a belief in law and knowledge of its details; and this attitude is represented to-day in psychology by the theory of concomitance.

MENTAL THERAPEUTICS IN NERVOUS AND MENTAL DISEASES.[1]

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I desire to present some thoughts on "Mental Therapeutics," drawn mostly from experience, which may have a practical value in showing the importance of ideas and of mental states in their influence for good or evil upon disease. The subject is not new, but it is one which is worthy of more attention than it has received from the medical profession as a body and it is of increasing importance.

For the purpose which I have in mind, the practice of medicine might be separated into three divisions: First, practice with drugs; second, practice with mechanical appliances, embracing surgery; third, practice with mental and moral means, including the influence of mental conditions upon the body. These three divisions are not separated in the employment of their respective means, and any or all of them may be applicable in a single case, yet it may be said, as a rule, acute internal diseases are treated by drugs, and surgical diseases by mechanical means, while many of the mental and nervous affections are, as a rule, "past all surgery" as well as pharmacy, and mental and moral influences powerfully affect them, whether used by the medical adviser or reaching the patient through other channels. It is also true in nearly all diseases that mental states of the patient and of all those around him have an important bearing upon the result attained in treatment.

The third division which I have mentioned—the use of mental and moral means in dealing with disease—would generally receive the least recognition and, perhaps, be considered by many

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of small importance. No one would deny, however, that mental means were applicable to some extent in mental and nervous disorders, but these disorders, as well as the treatment of them by mental therapeutics, have been and still are almost *terra incognita* to the average medical mind, though every practitioner employs mental therapeutics in his intercourse with his patients wittingly or unwittingly, and attainment of success is often largely due to their employment even in ordinary acute diseases, while failure results at times from lack of their use.

It is well known that mental states produce great and even extraordinary bodily defects. A familiar illustration of the simpler effects is the blush of modesty or the pallor of fear where a thought instantly and plainly produces a vasomotor change. An idea has been known to produce a blister where a patient believed a postage stamp or a piece of court plaster was *emplastrum cantharidis*. Similarly, pills of opium have been known to produce a cathartic effect. It is true that life itself has more than once been destroyed by a fatal thought. Again, ideas or the lack of them may produce insensibility, so that a surgical operation can be done without pain in a hypnotic state. A soldier in the excitement of battle may be riddled with bullets and yet not know it. The time is too short to go into details, which, indeed, are doubtless familiar to all.

But to assign importance to the mental state in, let us say pneumonia, or an operation for the removal of the appendix, would be thought fanciful by some. Surgeons especially are prone to overlook the value for good or evil to their patients of the mental condition antecedent to, during and after an operation, and cases have occurred where temporary or permanent insanity followed a surgical operation which it would seem might have been avoided by more careful attention to the mental condition of the patient.

Nervous and mental diseases are naturally those in which we may expect mental and moral therapeutics to be applicable. Coarse brain and spinal disease or structural lesions can, of course, be little affected by mental states, but it is more and more recognized that even in these a hysterical or psychical element is present. The so-called functional nervous diseases, however, are strikingly affected by mental influences. These diseases have

entering into them problems soluble and insoluble which relate to the connection between mind and matter. We have not been in a position to study these wisely until very recent years, and, in fact, so far as mental diseases are concerned, it cannot be said there is to-day any study or teaching of them in the medical schools commensurate with their importance, and so far as the average practitioner is concerned to-day, according to my observation, his sole thought in such a case is often not what he can do for the patient, but how quickly he can turn him over to an alienist or neurologist. But a change in this respect is coming, and is evident when one looks either at the curriculum of the colleges or the contents of books and journals. By slow and toilsome steps, the structure of the brain and cord are being unraveled. Like learning to read the ancient hieroglyphics, only infinitely more complicated and difficult, has been the process of gaining an understanding of the significance of outline, color, form or substance as microscopically seen in nerve cell, in cell wall and nucleus, in projection and association fibers, in motor and sensory tracts, in vascular supply and connective-tissue network. It is now known, however, that nerve fatigue involved in brain work, when it goes beyond the physiological stage, impairs nutrition, and in the cell and its nucleus can be read the story of strain and overwork, also of toxic conditions of the blood. Even the changes produced in functional diseases can, to some extent, be now deciphered and it becomes a question whether the division into organic and functional disease is anything more than a cloak for our ignorance, or, at least, something marking the point at which knowledge ceases, which point is being rapidly pushed further and further back.

It is not too much to claim that we shall ultimately understand the effect of intellectual and emotional processes upon the brain and grasp the principles that determine brain disorder and destruction on the one hand or building up and restoration to normal function on the other. We know that hope can make alive and fear can kill as an abstract proposition, but may we not expect to gain control of hope and fear and use them intelligently instead of blindly for our patient? The phenomena of mental healing are worthy of more attention than they have received. Those of Eddyism (which is the proper name for so-

called "Christian Science"), of osteopathy, of "divine healing," whether by saints' relics or waters of Lourdes, or the holy coat of Trier, have in them lessons for our profession. And here I beg to cite a few words from a recent utterance which strikes me as very apposite. I find it quoted from an address of Dr. E. H. Martin in the New York *Medical Journal* of March 3, 1900. Dr. Martin, in an address delivered at Memphis, related the following incident:

"When I was a student a young woman who happened to be an ardent Catholic, a patient of my preceptor, was afflicted with the most severe form of hysteria. For six years or more she had not walked from paralysis of both legs; for a lesser time she had been blind with perfect eyes. . . . I took a small part in her cure. I held my preceptor's horses in front of the priest's house during an interview. It came to pass soon after, that the young woman began to hope for a cure through a bottle of water from the fountain of Our Lady of Lourdes. . . . How many masses were said I do not remember. The bottle of water came, and on Easter Sunday, after weeks of prayer and preparation, the young woman was carried on a litter and laid in front of the altar. The bottle was opened, the holy contents were sprinkled on her and she rose and walked. Her sight was restored; a miracle was performed. My preceptor received no credit; he and the profession were hooted at, but he expressed a quiet satisfaction over the result."

The power residing in the influence of the healthful mind upon the sick mind and body is great and undisputed, but has been misdirected and left to the empirics, good, bad and indifferent. Certain diseases consist largely, for practical purposes, in diseased ideas—hysteria, hypochondria, neurasthenia—even traumatic cases in inherently unstable individuals often have no appreciable lesion and present only the effects of exhaustion or commotion from shock or concussion of the brain or nervous system with consequent defective nutrition of higher centers and hence defective ideation. The theory, however, that the suffering in these cases is purely a matter of imagination is a mistake. Whoever assumes that hysteria has nothing but a sham belief behind it and seeks simply to deny the presence of anything real, and to show the patient the error of his ways and thereby

effect a cure, has a hopeless task before him. To inform the patient that the suffering is purely imaginary and claim there is no disease, is the surest way to lose the confidence of the patient and thus all influence with him as well as the power of doing him any good. The same thing is true in mental disorder where delusions are entertained. It is not far from the truth to say that a morbid idea was never cured by argument. The idea will correct itself whenever normal conditions are restored.

Even in structural disease the influence of mind is powerful. Many paralytic and ataxic cases from organic brain disease are complicated with hysteria and hypochondriacal ideas. In the newer treatment of locomotor ataxia, patients are newly taught to walk after once having lost the power, by re-education of the muscles of coördination and the intuitions of movement residing in the gray matter of the brain and cord.

Furthermore, patients with pneumonia, typhoid fever, appendicitis, or even broken bones, are profoundly affected for the better by faith and confidence and hindered by fear and discouragement. An old Arabic apothegm represents the spirit of the plague as entering a city gate, announcing the intention of destroying a thousand lives, and in passing out again, when accused of slaying ten thousand, of saying: "I slew but one thousand, fear killed the rest."

The term "malade imaginaire" does much mischief. A sick imagination is indeed an undeniable reality, as any one who labors with it for months and years can testify, but it rests upon a deeper condition. The muscles paralyzed in hysteria are as truly paralyzed as those made helpless by organic disease. The idea is as true a pathological state as a clot in the cortex, though less understood.

It will not be profitable here to theorize as to the actual state, since it is "not a theory, but a condition," that confronts us, and the data for intelligent discussion are as yet lacking. We will not speculate, therefore, whether "retraction" or interruption by some other means of the paths of association takes place; whether defective nutrition impairs the normal consciousness and destroys the "psychological synthesis" necessary to full healthful consciousness; whether there is a conscious and a subconscious self and how these two act and react may be left to be

determined when we know better what the conditions of consciousness are and what it is itself. It is useless to assure the sufferers from hysterical paralysis that they only imagine they cannot move the helpless member. The morbid idea rests upon a brain changed in its functions by some obscure but material condition (whether an inherent defect, a change in nutrition, a toxic or impaired circulation, or two or more of these things), and this condition must be relieved before any change in the idea is possible. If a metallic disc, an electrical current, a magnetic touch, an electric-light bath or a hypnotic or waking suggestion will accomplish the result, these are not to be regarded as quackery, but used in a rational way. They are not in the last analysis any more mysterious than the action of quinine or calomel.

Often a long course of training, of practice in substituting hope and expectation for fear and apprehension, courage for despondency, confidence for distrust, is required in these cases.

All the above may be trite from an abstract point of view, but the concrete employment of it in practice is far too little understood.

The central idea of my remarks is that the cure of many nervous and mental diseases consists in a process of rebuilding in the patient natural and healthful lines of thought and association; replacing morbid ideas with normal ones, of forming new habits of thought and action by a process that may be in some cases likened to education.

Exact science has hitherto dealt little with the methods of cure by the imponderable influences of mind for which there was no known physical basis. It has too often, seeing how much of deception and fraud was associated with these methods, ignored the small residue of genuine truth. Earnest searchers are now gathering the facts essential for real understanding of working of mind in health and disease so as to promote the former and repress or cure the latter.

Two methods of obtaining relief through the influence of mind upon the body are found in practice: First, by some strong and rapid impression in the nature of an emotional shock, operating powerfully upon the consciousness; a hypnotic trance; an exaltation of faith or hope which perhaps disturbs the relation of the parts and allows them to return to newer and more normal asso-

ciation, being occult and obscure in its action; second, by a slower process of inducing a new mental state and habit and, through this, increasing or rightly directing the nerve energy and influencing favorably the circulation and nutrition of the parts concerned. The former, the quick way, sometimes brings a result which is both brilliant and phenomenal; such are the cases cured by hypnotic suggestion, by Lourdes water; by so-called divine healing or alleged "Christian Science." While many are relieved, in many of these the result is only temporary, and other cases are wholly inaccessible to this method. The second method, the plodding and patient one, is the one from which most is to be expected in the long run. Just as the ataxic can be taught to gain new control of muscles; so (and often more so) the neurasthenic can regain some (and often much) of the lost control of mental operations, conscious or subliminal, which in a normal mental state regulate sensation and motion and maintain the unity of functions, allowing no subordinate impulse or aberrant idea to usurp the place of reason.

In nervous diseases a weakening of the full central cerebral autonomy occurs through failure of nerve power. This unity and harmony are lost in the movements and sensations of the body. Some outlying motor or sensory region is no longer under control, rebellion or independent government is set up. The different parts act for themselves without reference to each other, or abnormal associations are formed. One part practically says to the other: "I have no need of thee," as when a healthy retina abandons its function in hysterical blindness or two parts not normally related become pathologically intimate.

The stomach, the heart and mucous or tegumentary surfaces are often affected by most complex reflex relationships of perplexing pains and paræsthesia. It may be that sense impressions are too weak or too strong; some sensation which should be fleeting remains long or permanently fixed. On the other hand, or in other cases, the motor apparatus loses its strength or regularity of action; tremors, spasms, tonic contractions, paralyses may occur, or those muscular "tics" which cause such annoyance and are often so intractable. Brissaud has recently reported several cases of what he terms "mental torticollis," and Chatin one of "mental trismus." In some cases the imitative instinct leads to

repetition of some movement, or recurrence of some imperative idea. In this manner diseased habits are formed, habit pains, and habit spasms, or habit ideas, insistent and unreasonable, usurp the place of normal sensation, thought and action. Phobias of various kinds of pathological doubt and indecision develop upon the groundwork of brain instability and of malnutrition or exhaustion of brain and nervous system, in which oversensitiveness or oversuggestibility cause prolongation of phenomena which should be fleeting. I will here cite some illustrative cases.

A patient of mine, at times when encountering a strong and disagreeable sense impression, would be troubled intensely by a sensation of having such impression driven in and "fixed between her eyes," and could not escape from the constant presence of this idea or obsession for hours and days. Another sensation she often complained of was a feeling as if the cuticle were removed from the whole surface of the body, and as if it were covered with lace, every thread of which was painfully present to consciousness. She was strongly possessed of the idea she was going to be insane. She had suffered in this way for seven years; she had been told her ideas were ridiculous over and over with the result of only aggravating the state. She finally grew so oversensitive and apprehensive that no outsider could come to the house for fear of bringing on a nerve crisis, and the doors and windows were barred and nailed up, and husband and daughters went and came through the rear entrance. This patient, by a prolonged course of invigorating spray-baths and massage, nerve tonics, graduated exercise, rest recreation, static induced current to head, and, especially, a systematic course of "waking suggestion" of the true condition and cause of her abnormal sensations impressing her with the fact that she could break the control of these ideas, obtained substantial but not complete relief. Her habits of seven years could not be corrected in three or four months, but after treatment she was able to return home and live more comfortably. She was no longer tormented by the idea that she was going insane and has been comparatively comfortable at home for a year.

Another patient, without the presence of any organic lesion, was continually tormented for months with the idea that her eyes were not straight. She would spend hours before the glass

watching the movements of her eyes, and day after day would continually inquire of every one around her whether her eyes were straight, repeating the question a dozen times in five minutes. Her eyes had been examined by two competent oculists and no lack of parallelism or other defect found. She was subject to violent migrainous attacks; there was a strong heredity of insanity. Nothing was found capable of giving relief. Hypnotic suggestion, waking suggestion, all forms of drugs, dietary and regimen alike, proved unavailing. She passed from under my care, and I learned later had been committed to a state hospital for insane.

Another patient, neurasthenic for many years, began to be troubled by the idea that she was going blind. The basis of this idea was the *muscae volitantes*, which are so common, and which were no worse with her than with many. The assurance of able oculists that she would not go blind had not the slightest effect. Her condition became more and more serious, and at last neither she nor her family could rest day or night. By coming under treatment in a sanitarium, she was in a few months entirely relieved and able to live comfortably at home again, where she has now been for a year and a half. In this case healthfully suggestive advice had more to do with the result than medication or other treatment.

In another case, a man who had been in active business suddenly shut himself up at home. He would not leave the house without his wife, nor could he be induced to enter any wheeled vehicle. Once having tried a suburban train, he became panic-stricken as soon as it was under way, rushed upon the rear platform and left the train as soon as stopped at the next street. He thought he would surely have jumped off if the train had not stopped. This patient had innumerable phobias connected with heart, eyes and other organs. The condition, though appearing suddenly, had been gradually brought on. There was a highly neurotic temperament to start with and some events acting as exciting causes. A year before, this patient had been greatly frightened by being nearly asphyxiated and had also had some anxiety and fear of scandal from a dishonest employee. He had used alcoholics pretty freely to relieve his depression. Three sisters of this patient had very similar attacks, in one of whom it

lasted two years. The mother and her family were rheumatic; the patient's grandfather had died of tuberculosis. Sufficient improvement was secured by treatment largely suggestive to enable this patient to go about freely in cars, to direct his business, though remaining quite closely at home and not yet free from many morbid fancies. He subsequently recovered so as to regularly engage in his business.

Another patient, a man of thirty-eight, traveling cigar salesman, was, at twenty, supposed to have had consumption. He went to Minnesota and recovered in a few months. Three years ago had a tuberculous gland removed from groin and extensive abscess and erysipelas following kept him ill a year. He was then well until about a year ago, when he was the subject of a "boycott" by a cigar union. Some threats were made against him at this time. Patient went away to a distant city and started in business, but everywhere he went he fancied he was followed and would be attacked by the spies of the union. He gave up business and returned home and continued to suffer from unreasonable fear; fancied he never went anywhere on the street without being watched and followed; thought people watched the house; had little rest night or day and constantly grew worse. This state lasted a year when he consulted me. I gave nerve tonics and mild sedative at night; ordered him to find something to do. He went into a factory as foreman and got on well for some months, though interrupted by acute sickness for a few days, during which all ideas were worse. His condition became intensified while he remained idle, and employment formed the best mental therapeutics for him.

As illustrating the state to be contended with in such cases, I will mention a few of the obsessions or imperative ideas encountered.

One patient, a woman, presented as the central and commanding feature the idea that a muscle was broken in her throat and the ends were hanging loose; also at times would say that her body was in sections, the vertebral column being separated in segments. On subjects not connected with self she was perfectly rational; enjoyed company, games, etc., and did not lose the power to dance, sing and play. She finally made a good recovery through suggestive therapeutics mainly. Another pa-

tient calmly insisted at one and the same time she was suffering from abscess of the ear, neuralgia of the heart, congestion of the lungs, inflammation of bladder, with imminent danger both of apoplexy and "spinal disease."

Two patients recently under my care presented the same obsession—an apprehension of defilement or "mysophobia." They would not wear or touch any article of clothing or object that had, as they imagined, grease or any spot upon it, refusing certain garments and throwing away or destroying clothing and other articles with entire disregard of value, common sense, or wishes of friends. These patients both improved under treatment away from home, and, after more than a year, are getting on well, though constitutionally very neurotic.

Another common morbid and unfounded apprehension is that of dying or going insane, and such a case will sometimes terrorize a whole family and all the circle of friends, dominating the situation day and night for weeks together. Many patients to the ordinary observer will present nothing amiss except the one all-commanding idea, but a careful study will reveal to the physician many ways in which the patient has changed from the normal; there is a lowering of the moral tone and temper, undue irritability and mental weakness.

A male patient, thirty-six years of age, foreman of railroad construction, who had a brother affected with locomotor ataxia, in consequence of immoderate work and excesses in alcohol and venery, became neurasthenic, and his mental state was one of extraordinary fear that he had locomotor ataxia himself. He had become familiar with some of the symptoms and presented all he knew about it—lightning pains, imperfect gait, station and coördination. The matter had been aggravated by several physicians giving a diagnosis of locomotor ataxia. This patient made a good recovery, mainly with application of mental therapeutical means, and is to-day, after nearly a year, engaged in active business.

The imperative idea which overshadowed all else in the case of a journalist, aged forty, who was under my care, was that he was a victim of epilepsy. His mother had been epileptic and nothing could satisfy him that he had not the disease himself. He had fought with this fear for months, and finally being totally

unfitted for work, went to bed at home under the care of a trained nurse. He did not improve, and later consulted me. I placed him upon hydrotherapeutic treatment, with massage and tonics and carefully regulated exercise and diet, seeking to give him mental diversion in every manner and to exert a salutary influence by constant suggestion to him of the correct view of his condition. He was conscious of the initial symptoms of epilepsy, fancied he felt the aura, etc. His emotional condition was pitiable; paroxysms of weeping, mental agitation, muscular contortions were constantly succeeding each other during his waking moments. He remained nearly stationary for weeks; the only thing he would think or speak of was his supposed epilepsy. He began to show much physical improvement, but could not see that he was any better. Later he did not dwell so constantly upon himself, and gradually began to take a little interest in outside matters. He was still far from well when his wife visited him. He decided to return home with her and come to me for treatment again if necessary, but after going home continued to improve and remains to-day, after four years, in good health and is actively engaged in business. I do not know that I cured him, but am sure he would not have gotten well except for assistance similar to that I gave him.

In these cases the re-establishment of harmony in the system becomes necessary. The body in this diseased condition may be compared to an orchestra in which there is no leader and each instrument is going off on its own independent line. The instruments themselves may be all right, but they must play together, and when the trombone is in the key of four flats and the violin three sharps, and one is on a dirge and the other on a jig, and several others have a "jag" (to speak profanely), the result is easily imagined but hard to endure. Reason must be upon her throne, rebellion must be put down; regulated and concerted movement are required. All the parts must be in normal conjunction with each other and with the central power that directs.

When an abnormal habit of thinking or feeling or movement has been formed, it is a matter of much time and difficulty to overcome it. In some cases, rest, in others, carefully regulated exercise, is needed. In all cases the drawing away of the mind from unhealthy channels is necessary, and the most important

means of attaining this is substitution of that which is healthful for that which is morbid by suggesting and keeping ever before the patient the fact that he shall resign himself into the hands of those who have the care of him and understand better than he possibly can what his true condition is and how it can be cured. Change of scene is often important, but travel or visiting of relatives are often undertaken with unfavorable results. Going away and resting quietly in a suitable locality is better. The patient is to have no theories about himself and do no worrying about himself; let his doctor and his nurse do all the worrying. It is necessary to enter with keen sympathy into all the patient's conditions, his heredity, his racial peculiarities, his occupation and all his personal limitations, habits, susceptibilities; the shocks and trials and accidents he has endured. Encouragement, explanation, suggestion (waking suggestion and hypnotic, if need be), must constantly be brought to bear. To know how far to indulge the patient, and where to sharply check him, is important. Implicit obedience must be required and yet with sufficient tact not to demand the impossible. SUBSTITUTION in mind and life of something healthful for something morbid must constantly be aimed at. Any normal interest is to be found and encouraged. The patient must be helped to help himself. He is often reduced to beggary in a neurotic sense, and restoration to solvency depends not upon medicinal alms, but upon furnishing a provident nervine " woodyard " in which he can work out his own salvation.

Some patients have a morbid heredity, and they are in some cases fully convinced they are to go the way of some one or more unhappy ancestor or relatives. They may with entire truthfulness be assured that even very bad heredity is no reason for despair, as there are almost always many descendants who escape, especially if their lives be wisely regulated with reference to nervous instability.

A mistake often made with such patients is to urge them to some great effort to throw off morbid ideas—as if something like the labors of Hercules were required—such a course often increases nerve strain seriously. Rather should such patients be reminded that in recovery and convalescence all will come easy and natural and that the " trend of things " is in their favor rather than against them.

The amount of physical exercise needs to be carefully watched and changed with changing conditions. I have many times found that patients while under mental strain and excitement do not know when they are tired. They have no healthy fatigue-sense, and while this is absent the doctor must have fatigue-sense (and common sense) for them. When the fatigue-sense returns with improvement of health, patients are often surprised at the small amount of strength and alarmed to see how easily they become prostrated, but this is in reality a good sign.

In patients with whom certain pains have become habitual, alarm and anxiety and even expectation intensifies them. I have found it useful to say to such patients that there is something abnormal in the working of their sense-perceptions. On telling them that the suffering is in the mind they will insist it is in the back or arm or what you will. They cannot deny, however, that the mind, as the seat of intelligence, is the only place in which pain can be known, and that if there was no mind there would be no pain. I then call their attention to the great variation of pain under certain conditions. A person stupefied with liquor or under great excitement may have severe injuries and not know it. On the other hand, consciousness may, under other conditions, INCREASE pain, and such is the case with many nerve invalids. Their oversensitive state multiplies pain and may make it *tenfold* greater than it should be. Instead of expecting pain and expecting it will be severe, they must seek to cultivate the expectation rather that they will not have pain or will not have it severely. The same idea is useful in combating insomnia. The nervous patient on awaking at night is immediately alarmed and feels he is surely awake for hours, which of itself destroys sleep, while if on awaking the patient subdues alarm, quietly turns over and disposes himself to sleep again he may be able to do so.

I am reminded of a patient who was relieved of insomnia for a considerable time as the result of reading Hugo Bassi's "Hospital Sermon," in which is the statement that the sick who sleep are watched over by the angels, but that God himself watches with them who wake. The influence of this thought was such that sleeplessness no longer tormented her as before.

Dr. J. J. Putnam, of Boston, in an admirable address, the

"Shattuck" lecture, before the Massachusetts Medical Society a year or two ago, remarked as follows: "To rid a patient of a tormenting delusion and increase his power of resistance against debasing habits and thoughts is quite the equivalent of a successful surgical operation and needs as much skill and preparation."

I have occasionally gone so far as to formulate a creed for a nervous patient caught in the clutches of some insistent fear or other incubus of neurotic disease, reading something like this:

"I believe in the healing power of nature. I believe that a skillful and experienced physician can understand my case better than I. I gladly accept the assurance that I can regain my health and will act upon that assumption. I will keep my mind free from doubt and fear and my thoughts, and, where possible, my hands busy, in a healthful way—so help me Hippocrates, the Father of Medicine."

This may be called the "Hippocratic oath" for the patient. It may seem puerile to a person in rugged health or to a physician who relies upon the "shot-gun prescription," or to one who is wholly engrossed in surgery, but not to a patient who believes himself hopelessly doomed to heart disease, cancer, consumption, kidney or bladder trouble, paralysis or any of the thousand horrors a sick imagination conjures up. In the desperation of such deplorable fancies the victim is glad to clutch at any straw. He is like the man hanging in the dark by his hands to a tree upon the side of a precipice and thinking he is 100 feet from terra firma. It is true the solid earth is only six inches away, but he does not know it. Many a patient who has repeated such words mechanically at first has come to have a hope and confidence from them in standing out against the assaults of morbid fear and apprehension which gave the first impulse toward natural and healthful feeling. It is known that placing the body in a given attitude, say that of prayer, is promotive of corresponding feeling; so the mind, by such form of words, may be placed in a more favorable attitude of thought. So far as Eddyism and the Eddy book are useful, they are useful in this manner and it cannot be denied that they benefit some cases.

I had intended to treat in this connection of another class of cases to which mental and moral therapeutics are especially ap-

plicable, but have not left myself time to do so—I refer to the "habit" cases in which drugs or drink are in control and usurp the place of reason. I will only say that in striving to help a case of this kind the most essential thing is the rehabilitation of the mental and moral forces which have been lost and which alone can place the patient where he can resist the lower impulse and exercise the higher faculty of reason. A hundred cures have been vaunted and each has served the purpose for those who earnestly believed in it, were anxious to reform and had some moral stability left, but for others was in vain.

I will conclude by saying that in mental therapeutics it is my belief psychiatry has a new and rich domain to conquer and annex by separating the false from the true in the fads and frauds of the day, and by placing upon a scientific basis the facts of mental influence upon physical states.

DISCUSSION.

DR. HUGH T. PATRICK:—I agree with Dr. Dewey's statements throughout. No one who knows Dr. Dewey and is familiar with his wide experience, conscientious work and level-headed judgment, would hesitate to endorse in advance anything he might have to say. My remarks, therefore, will be simply supplemental and will be confined to the illustration furnished by two cases. I had expected to have the first patient here this evening, but she was unable to come. She is a woman, 34 years of age, and for the last three years has been a burden to herself and a nuisance to her family on account of an insistent, imperative fear that somebody will break into the house when she is there alone. She can reason about it as rationally as any one; she knows to a nicety that the probability of such an occurrence is exceedingly remote; she realizes the foolishness of this phobia, and daily resolves that it shall conquer her no more. Her fear has given rise to family dissensions, and one of the results has been that she has neglected her domestic duties; she has become generally nervous and sleepless; has lost her appetite, and has run down in general health. She is a dispensary patient, and I concluded that if I could not give her the best mental therapeutics, I would give her what I could, and so I resorted to hypnotism. She is a

good subject, has had about six treatments, and now is practically well. I have no conviction that she will remain indefinitely well of this and other nervous troubles. She has an abnormal, susceptible, impressionable nervous system, and whether she ever gets this particular phobia again or not, will be largely a matter of chance and circumstances. But this is one of the means of effective mental treatment in a few isolated and selected cases.

The other case is that of a young man, thirty-three years of age, whom I saw more than two years ago, he having been at that time a confirmed invalid for seven years. He had consulted a number of physicians without deriving more than transient benefit. Some time after leaving Chicago cured, he sent me a very clever sketch he had written for a magazine, and above it he wrote: "The story below is sent to you merely as a medical document, and not on account of any literary merit that may have crept into it. It was written by a patient of yours who, at the time, was said to be suffering from 1, enteritis; 2, catarrh of the bile ducts; 3, spasm of the ciliary muscle; 4, Rigg's disease; 5, contraction of the anal sphincter; 6, melancholia; 7, hysteria; 8, general neurasthenia; 9, after-effects of appendicitis; 10, after-effects of eye strain; 11, general weakness of the digestive apparatus; 12, incisional hernia; 13, over-work; 14, under-work; 15, nothing but crankiness." To this category I might add what he doubtless forgot in his hurry—that he had been treated for various forms and degrees of refractive error; that he was said to have a dilated stomach and gastric catarrh; was said to have had appendicitis, for which the appendix was removed, and at that operation his colon was found to be enormously dilated. I saw the operator, who is a very excellent surgeon, and he said the man's colon was about the size of one of these big German blood-sausages. He had been told repeatedly that he was suffering from autointoxication. He was brought to Chicago by rail in a sleeping berth, and on his arrival was placed in a carriage, where a mattress was arranged for him, and taken with great care to a residence on the north side, every precaution being taken so that he might not have one of his attacks of "collapse" to which he had been subject for many months or years. These attacks constituted one of his numerous symp-

toms. During such collapse his pulse became feeble and rapid, he became cold, covered with perspiration, and apparently was about to die. He had had all manner of indigestion; he was troubled with alternating constipation and diarrhœa. He had had every kind of headache that a patient could describe; he had had backache and sleeplessness. In short, he had had most of the complaints a man can have except those which indubitably point to grave organic disease. I took the patient under protest; I had heard of him for several years and did not want him. He came to me as a last resort. I examined him carefully and systematically, nearly every day for two weeks. I began with the ordinary physical examination, inspected his stools daily, gave him test breakfasts and test dinners, washed out his stomach and examined the contents, examined his blood, and, in fact, I examined him in every way that I knew, and found absolutely nothing abnormal except a dilated stomach, which performed its functions very well indeed. One by one I stopped the various medicines that he had been taking, first the enormous doses of atropine which were being dropped into his eyes every day and which were said to have accomplished some good; then I stopped the laxatives, antacids, tonics, etc., until he was taking nothing. It seems to me, that in most cases the most potent element of mental therapeutics is a thorough, systematic and conscientious examination of the patient. This is a suggestion to which every single patient is entitled. It ought not to be a gift. It is the patient's due, and in my experience, of all the elements of mental therapeutics, it is the most potent. In this case, that was the first, and I really think the most potent, element in the recovery of this young man. He had had his stomach washed out daily at one of the best hospitals for four or five months. Statements were made to the various doctors regarding the condition of his stools, but he said that not a physician had seen his stools until I examined them. This greatly impressed him. He never passed an abnormal stool to my knowledge. By gradually stopping his medicines and gradually getting him out of bed, he soon discovered that he could eat a square meal, sleep all night, and could see a few friends without having attacks of nervous prostration, palpitation, collapse, headache and dizziness. He tried to produce one of his attacks of

collapse so that I might see it, but much to his surprise and mine, he could not induce it. I early discovered that one of the most powerful mental anti-therapeutics in his case was the presence and influence of his very devoted wife. So I sent her on a visit to her home, and when the young man was able to trot all over town, to visit the suburbs and have a good time generally, I sent him off East with the absolute agreement between him and his wife that he should not see her for a year, and only write to her once in two weeks, and then a very short letter. He has made a complete recovery. He has worked for two years incessantly and hard. He was cured by mental therapeutics, pure and simple, and nothing else. He still has a dilated stomach, and once in a while it gives him a bad day, but constitutes no real disability.

Apropos of this fact, I wish, in closing, to emphasize a point to which I have called attention before, but which will bear repeating. It is this: the mere presence of structural abnormity, of organic disease, if you please, is of no earthly importance if it does not cause symptoms. I should like to have about three-fourths of the profession let that idea soak in. In my experience it is altogether too prevalent, that as soon as a tipped uterus, a dilated rectum, a stomach that lies too low, an error of refraction, an hypertrophied turbinate, or a curvature of the spine is discovered, all the complaints that that patient lays before the physician are attributed to that anomaly at once, without making the necessary physical examination, or discovering whether there is really any necessary connection between the structural defect and the symptoms.

Dr. Wm. E. Quine:—Consideration for those who are waiting to be heard demands brevity. My discussion of the paper will be limited to a concurrence in the views it embodies. On the general subject of mental therapeutics I have something to say.

That the mental state of the patient, when confident and expectant, is an important aid to the medicines and methods of the physician has been a fact of familiar knowledge from time immemorial. Paracelsus, that combination of princely philosopher and charlatan, adjured his sick "To have a good faith and a strong imagination."

Faith wins victories no less than medicines; and there is no more certain way of commanding it than by a systematic and exhaustively minute examination of the patient and a recording in his presence the results of that examination. Such a beginning by the doctor never fails to create a strong impression in his favor. On the other hand, he discredits himself at the start when he hastily writes a prescription after a few words of perfunctory conversation and without any examination of the patient at all.

I am sure that much of the service rendered by the physician is owing to the faith his people have in him. Have you not lulled them to sleep with hypodermic injections of water? Do you doubt the genuineness of the cures wrought in the temples of old by incantations and magical songs? Do you question the efficacy of prayer when prayer is backed by exalted faith? Do you deny the achievements of the "Royal Touch," of "Sympathetic Powders" or of "Perkins' Tractors," in times past; or the achievements of Our Lady of Lourdes, or of Christian Science in our own time? Is it not true that numberless cases are ascribable to the potencies of Hahnemann, which contained no medicine at all, just as certainly and genuinely as are cures to-day ascribed to the operation of real medicines? And may not the cure have been wrought in the latter case, as in the former, by the faith of the patient? Has not faith, or "suggestion," or some other sort of mental agency, much to do with the achievements of Keely cures, Sanitaria, Electrotherapeutics and Dowieism?

It is a mistake to imagine that the efficacy of mental therapeutics is limited to hysterical disturbances. I have known the pain, anorexia, vomiting and emaciation of palpable pyloric cancer to be arrested by the condition of religious exaltation, termed by our Methodist brethren "The Blessing," when it was supported by a conviction of assurance from on high that recovery would take place; and I have seen the patient gain in weight for a couple of months while in a state of ecstasy and spending all her waking time in devotional exercises and rejoicing, while the cancer kept on growing. Of course the patient died; but her faith had done more to relieve her suffering and prolong her life than my medicines had done.

Many years ago I had a young lady patient whose pelvic organs had been badly injured by a fall. They were greatly displaced and inseparably matted together. The pain, dysuria and rectal tenesmus were almost unendurable. The patient had been invalided a couple of years when I first saw her. She was eager for any operation that would either kill or cure. The late Dr. W. H. Byford visited her dozens of times, and Dr. N. S. Davis, a few times, in consultation or to relieve me. Dr. Byford was importuned to operate, but declined. Medical treatment was of no avail. Complications began to creep on; an intractable diarrhœa being the most formidable of them. The patient was extremely devout, as were all the members of the family. Her brother was a Catholic priest of great piety. She had a vision one night. She was told to go to Lourdes and get well. Her faith was vehement, but it was not much greater than that of other members of the family. She got ready to go, and I spent a couple of hours examining into and recording her condition, a day or two before she started. On her way she stopped in New York to consult Dr. T. Gaillard Thomas. He pronounced her condition incurable. She went on, accompanied by her brother. On arriving at Lourdes she was exhausted by pain, dysuria, sea-sickness and diarrhœa, and was unable to walk. She was carried on a stretcher to the pool and helped into the blessed water. Upon being taken out and recovering her breath she exclaimed, "Glory to God. I am well." And she was well. That very afternoon she walked several miles. Her pelvic distress was gone and her diarrhœa was cured; and the cure was permanent. She was well. The newspapers of the world recited the story.

Some weeks after her return the lady visited me at my office, and I examined her and recorded the results of the examination. Then I compared the new record with the old. There was as much pelvic pathology as there ever had been. There was no change at all. But now the lady was well. Would you say a cure was less a cure that reestablished normal function and left morbid anatomy undisturbed, than that wrought by the eviscerating methods of the modern gynecologist? Is not the first-mentioned kind altogether more "miraculous" than the other?

This case, and others like it, that have come into my life,

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This case, and others like it, that have come into my life,

impels me to endorse and emphasize what has just been said by my friend Patrick about the relation between morbid anatomy and morbid physiology. It is morbid physiology that makes one sick. Morbid anatomy which does not cause any derangement of function should be left alone. It is bad practice, in my view, to "treat" or operate upon, or even direct the patient's attention to, a condition of morbid anatomy that has never caused a symptom. I'm sure I have done much harm by officiously announcing the discovery of "movable kidneys," "dilated stomachs," "displaced uteri and ovaries," and so on, when no symptoms were present, or ever had been present, in any way connected with such conditions.

Faith, then, is a great curative power. When it is brought into play by non-medical persons, such as Mrs. Eddy and Mr. Dowie, physicians generally regard it as a species of imposition or charlatanry and the exponents of it as mountebanks; but physicians have yet to learn that they do not and cannot monopolize the faith-cure business.

DR. WILLIAM A. EVANS:—The debt we owe to Dr. Dewey for the paper which he has presented this evening has a double aspect. In the first place, we are his debtors for a scientific contribution to the subject of mental therapeutics. In the second place, his paper serves to call to our minds the fact that the best treatment of Christian Science and of the Christian Scientists, and of those making use of related psychological principles is one of calm judicial scrutiny. On this subject I quote from an essay written by Dr. Nathan Smith, in 1830: "To disenthrall the public mind medical men must cast off the whole garb of the charlatan, nor suffer anything to remain which shall confound medical philosophy with empiricism. The profession must seize every opportunity to educate the community in the first principles of medicine, and when this is accomplished the medical scholar may, in public opinion, safely rest his ripened claims to reputation."

It is worth while to inquire into definitions of disease. Thomas' definition of disease is "a deviation from the normal in the anatomical or chemical structure, or in the functions of the body, its organs and elements of organs, which exceeds the limits of

physiological variations." Cohnheim's definition is: "A disease is where the regulating mechanisms, acting in opposition to one or more vital conditions, are no longer adequate to secure that the various vital processes shall proceed undisturbed." Lazarus Barlow says, "Diseases are often classified as organic and functional. This is a cloak for ignorance. It is inconceivable that a normal cell should perform its function abnormally." Thomas enunciates this law: "There are no fundamental or far-reaching differences between normal physiological processes and morbid pathological processes in the organ. The same chemical and physical laws which determine the course of physiological functions also govern pathological processes. Processes that are essentially pathological differ merely quantitatively from physiological processes."

If we are to accept the teaching of these men as to broad pathological principles, it is only necessary to prove that physiological processes can be influenced by the operations of mind; for if the differences between physiologic and pathologic processes are merely differences of quantity rather than quality, then if mind can influence the one, it can in some measure influence the other. What physiologic processes are not influenced in some measure by the mind? There is no histologic structure that plays a more important rôle in pathologic processes than the vascular apparatus, and yet blushing and the formation of blisters, as cited by Dr. Dewey, are evidences that vascular phenomena are in some measure under the influence, though not directly under the control, of the will.

There is not uniform relation between pathologic anatomy and pathologic physiology. Sometimes a post-mortem shows structural alteration out of all proportion to the changes in function. The converse is true. But the means by which we know disease is symptoms and symptoms are phenomena of function. But symptoms are largely nervous manifestations, sympathetic or cerebrospinal. Some of them spring from psychic areas; others from areas somewhat removed; yet the finer technical methods of to-day show dendritic ramifications; protoplasmic prolongations, and commissural fibres in great profusion.

There is, perhaps, no pathologic process that does not have a nerve side. That nerve side is best shown in the inflammations

of the exudative type and least shown in the toxic partial necroses, such as cloudy swelling. It is true that this nerve connection is mostly by the sympathetic system. Yet we know at the present time that the sympathetic system is always under cerebrospinal influences, and in specially educated people some portion of it is under cerebrospinal control, control meaning something more than influence.

And why not? We know that histologically so far as the nerve elements proper are concerned the two systems are the same. The histological differences are in the wrappings. If we look at the question from the embryologic standpoint, we find the same condition of affairs. Whereas the central nervous system develops from that epiblast immediately surrounding the neural canal and the sympathetic system from plates of epiblast removed a little distance, still the plates for the sympathetic system are only offshoots from the plates for the central nervous system. From the segmental ganglia which produce the sympathetic system also develop those of the cerebrospinal ganglia which are not situated in the brain or spinal cord. While the trend of events tends to carry the cerebrospinal system away from the sympathetic, in function, they never lose their relation. Education can bring them closer again.

The clinical facts are not at variance. We have evidence constantly at hand that mental impulses influence disease processes. What successful doctor is not in some measure a hypnotist? That physician who carries to the bedside of his patient naught save a knowledge of medicine but ill discharges his duty. He must exercise psychic influence constantly, and the force of a great personality is as potent as medicinal aid.

Dr. Sidney Kuh:—I have only a few words to say, because such a thing as a criticism of Dr. Dewey's paper is absolutely out of the question. There are one or two points which might be added in a discussion on mental therapeutics. Suggestion is not only a great power for good, but occasionally its misuse may lead to considerable harm, a point which was suggested to me by an incident I heard about a few days ago. A certain prominent physician in this city was called to examine a patient, and after having completed his examination, came to the conclusion

that the patient was suffering from a serious organic trouble. Whereupon the poor victim at once went to bed, and for several weeks was in great agony, having all the symptoms of the organic trouble. Finally, becoming dissatisfied, on account of the continual negative results of the treatment, he called in another physician, who made a thorough examination, and at the end of it came to the conclusion directly opposite to that reached by the first doctor. The simple statement made to the patient that he was a "d——d f——l" had more effect in causing the symptoms to disappear than all the drugs given by the first physician. The case illustrates nicely how much we can injure our patients by careless suggestion.

Not only the patient, but the physican himself, is influenced by suggestion and by autosuggestion. That is the only rational explanation we have for the marvelous results which are always attained whenever any new drug is put on the market. We read of brilliant results obtained by others, believe these reports and because of our confidence in them inspire the patient with hope. As we meet with occasional failure in patients who are less suggestible, we lose confidence ourselves, and with that our results become less and less satisfactory.

Dr. Henry Gradle:—The paper of the essayist is so far-reaching, that it seems to me proper to discuss it from various aspects. If I understood Dr. Dewey correctly, he referred largely to those cases in which the mental element was so prominent that they might almost be said to come under the head of mental diseases. These, I think, the general practitioner recognizes easily. The question of nervous exaggeration and the propriety of mental therapeutics come in also in a large series of other cases in which I think the nervous element is not fully recognized. All lesions have a minimum amount of discomfort incident to them, and this minimum amount of discomfort is very often exaggerated through mental influences or unduly perpetuated. Indeed, I believe it can be safely asserted that in some instances the influence of a physician who does not fully recognize this exaggeration of symptoms may be detrimental to the patient.

Within my own domain of observation, there are two classes

of patients who present psychic exaggeration of their complaints. One of these is the class who have fictitious sensations in the pharynx in consequence of some trifling or former lesion, for instance, a slight inflammation of the lingual tonsil, or an irritation of some part of the throat, produced by the passage or temporary retention of a foreign body. Such fictitious sensations, usually referred to the presence of a foreign body, can annoy a patient seriously, and are entirely irremediable by medicinal means. It takes some form of mental suggestion to cure such patients.

Another larger class of such patients, are the cases of asthenopia not due to any anomaly in or about the eye. According to the trend of the oculist, such patients may be ordered weak cylinders, or prisms, and still others have had the tendons of their ocular muscles cut, a procedure which has now almost gone out of practice. Yet in all such instances there are but few successes, with a large number of failures, and even the successes are usually but temporary. Patients often come to us with severe asthenopic troubles, partly localized in the eye, partly exaggerated in the form of headaches, or radiating nervous symptoms, and in many instances we find no lesion in the eye of sufficient importance to account for the pronounced suffering. The symptoms are physically exaggerated, or are gradually brought forth by the patient's anxiety concerning some former transient trouble which may once have existed, but has since ceased. Sometimes uncomfortable sensations in the eye, or headaches around the eye, are perpetuated even after the original cause has ceased, and it is difficult to treat such patients satisfactorily.

I can fully corroborate what Dr. Patrick has said in regard to the effect of a thorough examination, and a nervous patient can have no better tonic in general than the assurance of curability of the disease based on an examination that seems to him satisfactory. But even this fails in many cases. A good many people come to our offices without the idea that they have serious eye disease, or that they are in danger of blindness. They want relief from mere discomfort and unless you can promise that relief absolutely, which is not always a safe thing to do, they are apt to leave you and seek the services of some other physician. Of late years I have found the use of the faradic current of very

great utility in this class of cases. Of course, I do not wish to be understood as attributing any physical influence whatsoever to the use of electricity, for my success has been just as good in these functional cases, when there was no connection at all with the actual current, and when the inert sponges were applied in a "blind" fashion. It is purely a mental influence on the patient which is unmistakably serviceable in many of these cases.

DR. DEWEY, in closing the discussion, said: Nothing seems to have been said in the discussion to call for any extended closing remarks on my part. There is one point I would like to dwell upon with reference to the examination of neurotic patients, and that is the effect of suggestion in examining patients at times. Sometimes, when we ask such patients questions—as, for instance, Do you feel this, that or the other thing?—seeking to bring out the symptoms in order to reach a diagnosis, very often we will get from such patients an affirmative response, or we will suggest something to the patient, and perhaps on second thought he will believe that he had observed such and such symptom. I have known patients who have been examined in a way that was perhaps too suggestive, especially those patients who have sustained a personal injury, and were engaged in litigation on that account.

I fully agree with all that has been said regarding the value of a thorough, systematic examination, in order to satisfy not only the physician but the patient himself.

SIGNS OF DEGENERACY AND TYPES OF THE CRIMINAL INSANE.[1]

By CHAS. A. DREW, M. D.,

Medical Director, State Asylum for Insane Criminals, Massachusetts.

"Insanity is often the logic of an accurate mind overtasked. Good mental machinery ought to break its own wheels and levers if anything is thrust among them suddenly which tends to stop them or reverse their motion. A weak mind does not accumulate force enough to hurt itself; stupidity often saves a man from going mad" (Dr. O. W. Holmes). It is the thought of the "autocrat of the breakfast table" rather than the scientifically accurate teaching of the medical professor that I quote you. I do not suppose the poet-physician intended these lines for the instruction of his professional brothers; surely he may be granted the poet's license, and I suspect he voiced a thought that is widely prevalent even to-day. I suppose you gentlemen of this society hold, speaking broadly, that the best mental machinery regulates itself so quickly to the changing currents of stimuli that it never breaks its own wheels and levers, in spite of all the noxious agents which tend "to stop or reverse their motion." Yet I think you would admit that there is a kind of protection in mediocrity. You would own that the safest, if not the best kind of genius, is the capacity for hard work long endured; for the doctrines of evolution and atavism must now be reckoned with.

There was a time when a man's physiognomy testified, as a whole, for or against him and his forebears, with more or less accuracy, even as the outlined clinical picture of typhoid was sufficient for the old-time physician. Now the doctrine of degeneracy calls for details before deciding whether we will be

[1] Read before the New England Psychological Society, March 25, 1901.

reprobates, if we get a fair chance. The size of your head does not count much, though your reputation may suffer if it be of either extreme. It may be dolichocephalic or brachycephalic, within certain limits, and not injure you greatly, but we are told that the very long head suggests degeneracy and that the thick head is a disappearing type, and should lead to a critical examination (Talbot, Degeneracy, pp. 170-171). It is therefore manifest that to be mesocephalic is by far the best form. The authorities on the stigmata of degeneracy hold that it reflects on the possessor of a skull with a cephalic index above 87° or below 74°; the cephalic index being obtained by dividing the greatest biparietal diameter, multiplied by 100, by the long diameter from the glabella to the occipital protuberance. The average of the former for men, according to Berkley, being 14.75 cm. and the latter 18 cm. would give an average cephalic index of 82°. The average long diameter for women is given as ½ cm. less and the short diameter ¾ cm. less, giving practically the same cephalic index.

While there are many patients in the Asylum for Insane Criminals with marked abnormalities of cranial outlines, I do not recall one with so unusual a skull as was the boat-shaped calvaria, we have seen illustrated, of Sir Walter Scott. But perhaps the relative development of the cerebral and facial regions of the skull are more significant, as characterizing the higher and lower human types, than deviations from the average cranium. Talbot has pointed out that the human face at birth is so near like that of the monkey that if only the heads of both were exposed to view it would difficult for a casual observer to distinguish one from the other (Degeneracy, p. 179). In the process of growth and development the cerebrum of man and the face of the ape more and more predominate. An angle made by two straight lines, the base being drawn through the meatus auditorius to the base of the nose and the other line falling from the center of the forehead to the most advanced part of the superior maxillary will give the facial angle of Camper. With the head held so that the base line would be horizontal, Talbot would drop a line perpendicularly downward from the supraorbital ridge intersecting the upper and lower jaw and chin. He would label "atavistic" those jaws which

protruded much beyond this line and those which much receded as even more degenerate.

Camper would allow 10° for variation in race, and Talbot holds that the angle between 80° and 90°, giving an Apollo type, may be accepted as an ideal by which to study degeneracy, though he states that the Caucasian race as a whole has an angle of 75° to 80°. He quotes Camper approvingly to the effect that: "if the angle is above 80° we have the antique head; if it inclines backward we have the head of the negro; if back still further the head of the monkey; inclined still more the head of the dog; and still further back the head of the goose." Fortunately for many of us who would be counted among the evolutionary Brahmins, our palates are not exposed to the gaze of men like our ears and our noses. There is no doubt that the nose and upper jaw frequently suffer from arrested development; and that an unstable nervous organization is a strong causative factor is evidenced by the greater frequency of such maldevelopment among the criminal and neuropathic. Talbot says that nearly 50 per cent of the criminals in the Elmira and Pontiac reformatories present marked instances of such stigmata. Making due allowance for the tendency of enthusiasts to exaggerate the importance of accidental and unimportant deviations, which seem to support their theories, it still seems true that a good nose has a value, apart from being a convenience on which to hang eyeglasses. If an extra large nose is to a man's credit the rule does not hold for his ears; for of all man's physical adornments his ears most often betray his genealogical skeletons to the meddlesome anthropologist. Not only must your ears be set at equal heights on your neck; but, to be in high caste, they must have pleasingly curved borders, nowhere pointed or irregular. They should not be much over 2½ inches in length and about one-half as broad. There must be a well-marked helix, but it is not well for the same to sport a Darwin's tubercle, nor for its root to pass across the concha. Certainly the helix should never be bifurcated, which is always proper form for the antihelix. The ear should have a lobule not adherent to one's neck, for a "jug-handled" ear excites suspicion; but this rule is so often violated by the leaders of society, that not to conform will not disgrace you. It is said that the ears

of degenerates frequently grow to an enormous size and stand at right angles from the head while others are very long, narrow and pointed. Concerning the proper angle to wear our ears, 15 to 30 degrees is considered good taste. Both Frigerio and Talbot agree that thieves[2] wear their ears closer to the head than do homicides, the former seldom having an angle greater than 45, while the ears of the latter frequently stand at right angles to the head.

As anthropology at present is far from being an exact science, it goes without saying that a deviation from the average which one observer would count a stigma another would call merely an accidental and innocent variation; and so it is that any other member of this society might find a widely different percentage of degenerate skulls, ears and palates than we have noted at the State Asylum for Insane Criminals. It has been my plan and my instructions to my assistants to record as abnormal only those departures from the healthy average sufficiently marked to attract the attention of the casual medical observer.

Of our 382 patients, we do not know of a case of cleft palate or harelip. Some observers have reported as high as 5 per cent of each of these abnormalities among criminals and among the insane. Of the last one hundred cases admitted to the Asylum for Insane Criminals, 44 had abnormalities of cranium sufficiently gross to be noted as marks of degeneracy; 40 had degenerate ears, and 39 had palates sufficiently abnormal to be recorded, by our rule. It is my opinion that if those lesser deviations pointed out by Talbot and others as signs of degeneracy had been noted as stigmata, less than 25 per cent of the skulls and jaws could have been passed as normal; and as many as 90 of the one hundred would have been counted as having degenerate ears.

Whether we credit great or little importance to the physical signs of degeneracy, we will admit that the ear has relatively a

[2] It is not clear that these writers include international thieves, or those who would steal the birthright of a weaker people. It is presumed that they mean only those who would steal your purse, umbrella and such "trash." However this may be, it is my observation that the average angle which the ears of the Anglo-Saxon make with the mastoids is nearer 45 than 25 degrees.

poor blood supply, and is, moreover, particularly susceptible to vasomotor influence, as evidenced by its varying capillary changes under influence of the emotions. It would seem reasonable, *a priori*, that the ear should be a more delicate index of the integrity of brain neurons, especially those participating in physical development, than other external organs. And this is what the enthusiastic advocate of anthropometry claims, and what the evidence, so far as I am able to judge, tends to prove. But we must never forget that compensatory effort which seems to be a law of nature; and though the ear and the nose and the mouth may seem to exalt or condemn one, we still must wait till we "have summered and wintered a man" before we know all his tricks. One would be bold to claim that mental and moral anomalies should always correspond with physical anomalies of the individual. This would be to deny the potency of environment and of education in moulding character. Mental and moral degradation resulting from a man's own excesses would not be expected to affect his physical development; while if his father was drunk at the time of his conception and his mother frequently intoxicated during gestation, we would expect a fine crop of degenerate stigmata as a consequence.

The first case I offer to illustrate my paper is P. O., 30 years old, a native of Ireland, well known to those denizens of Boston whose "sphere of influence" is Atlantic Avenue and vicinity, as "Paddy the Bluff." The poor photograph I show you rather flatters Patrick. This young man is poorly developed all round, except for his generous ears, he being less than five feet tall. One ear is set slightly higher, as you will see by his picture. You cannot see that the posterior surface of those ears makes an angle of about 90 degrees with the mastoid. The antihelix and lobes are very prominent. He is well known at Deer Island, having been arrested nine or ten times for being idle and disorderly. Prison discipline only made him worse. He is a bad sexual pervert, and when put in solitary confinement would chew his toes and injure himself in other ways. About two years ago he began to have epileptic seizures. Please notice the outlines of the skull which I pass with the photograph. Note the bulging of the right side as shown by the outline of the circumference, as well as the peculiar form of the occiput

as shown by the anteroposterior outline from the glabella to occipital protuberance. The cephalic index is low (75) yet still within what would be considered normal limits.

Case No. 2, J. F., is a low grade imbecile, a criminal court case, arrested for misplacing a railroad switch to please some friends. He is a sexual pervert, inclined to violent outbreaks of passion, when he will break glass, but he never attacks others. Is said to have had epilepsy some years ago, but has had no seizures for three or more years. He helps some about the ward and is about the best checker player at the asylum. Note that the head is above the average size, but dolichocephalic to a marked degree; the cephalic index being only 71. Right eye with its superciliary ridge is higher than its mate. The ears are at about the correct angle of 20 degrees, but the whole pinna is very thick and the concha is very small. There is marked protrusion of the lower jaw.

Case No. 3, W. F. H., is one of "dementia præcox," such a case as Kellogg has graphically described as "pubescent insanity." Note that this is a marked type of the brachycephalic skull, the cephalic index being 87.5°. Observe especially the anteroposterior outline over vault of cranium, with the marked flattening at occiput. The palate was very high and narrow; right ear, which has only a rudimentary antihelix, is higher than the left, of which the antihelix is well developed.

Case No. 4, A. L. M., is a criminal court case, who committed a homicide in the early summer of '93. He was sent to Taunton Hospital to be held till further order of the court and transferred to the Bridgewater asylum Nov. 22, 1893. He was suspicious that his wife and her physician were criminally intimate and calling the latter to the door shot him. I present this case, not so much to illustrate stigmata of degeneracy as to represent the class of high grade imbeciles who, I suppose, are frequent visitors at the criminal courts. He is weak-minded, morbidly suspicious, egotistical, and prone to magnify petty things. This patient might be classed as a paranoiac of the simple type, the morbid suspiciousness and marked egotism, with a slowly progressive mental weakening, being his marked characteristics. Accidental happenings are sufficient to excite him to delusions

of poisoning, but these ideas fade in a short time. Once he made charges of so improbable a nature as to suggest hallucinations of sight, but usually he seems like one living in the borderland of insanity close to the pathological boundary. He has a marked dolichocephalic head, the cephalic index being only 72°, but as you may see from the photograph and cranial outlines, there are no marked asymmetrical departures of the head or face. The ears are well shaped; the palate is rather broad and flat.

His ears are not at all like the homicidal ears as described by Frigerio and Talbot. And I wish here to express the opinion that if homicides have ears characteristic of their class, the rule can only apply to those who kill from an innate passion for killing, not those who commit homicide while intoxicated, or while suffering from an ordinary form of insanity. To my mind the effort to differentiate to this degree would discredit one's reputation for a broad conception of the whole subject. I do not know that our patient was ever previously arrested, and while I have reason to believe that other members of his family are strongly neuropathic, I do not believe he is dominated by impulses to kill, except when excited by strong emotions such as jealousy. A sister reports that he had a sunstroke at the age of seventeen or eighteen and that for a long time afterwards he complained of a pain in his head.

Case No. 5, A. T., criminal court case. Crime, murder Sept. 11, 1895. Killed his wife whom, he thought, to be criminally intimate with his hired man. Apparently suffered from periodical insanity of the depressed type. Large head, bulging forehead. Occiput very irregular. Ears close to head, very large lobes. Tragus and antitragus also very large. Root of helix runs across concha.

Case No. 6, N. M., criminal court case, shot his uncle without provocation Oct. 16, 1897. Admitted to Asylum for Insane Criminals Jan. 20, 1899. Has been an inmate of Northampton Hospital for Insane. Had a brother die there. Has always been an imbecile and never has been able to care for himself.

Right frontal bone very prominent. Ears stand out at 90 degrees but the helix is large and bends back at a sharp angle

giving the ears a more normal appearance. Upper jaw poorly developed. Lower jaw very projecting.

Case No. 7, M. B., a young convict, not insane, only nineteen years old, who terrorized the people of Barnstable County less than two years ago. Broke jail, shot an officer, was at large some time, with a large posse hunting for him. Claims that he was severely treated when caught. Developed multiple neuritis of the motor type and was sent to the State Farm Hospital. Could not stand. Had foot-drop and wrist-drop. Is now practically well. Has an innocent boyish face, but a "shifty" eye. Is a moral degenerate without question; but only the ears would suggest degeneracy. There is almost no helix and no lobe, but a marked Darwin's tubercle pointing backward. The root of the helix extends quite across the concha.

Case No. 8, A. S., paranoia persecutoria; crime, assault with a loaded pistol on one who he thought had been criminally intimate with his wife.

In conclusion, I hope it is understood that this paper only aims to be suggestive. I have not laid so much stress on the moderate deviations from the average of cranium, jaws, nose or palate as do Talbot, Lombroso and other writers, and before drawing definite conclusions we would wish to take cranial measurements and note variations in features of a large number of persons of whose morals and nervous stability there was no ground for question. We would regard deviations from the average of moderate degree, as an evidence of an unstable nervous organization only, not necessarily as a symptom of insanity or criminality. There can be no doubt that many who may be fairly classed as neuropathic are among the most estimable citizens. Probably many of our most gifted musicians and artists and some of our dearest friends belong to this class. If Dr. Holmes was half in jest, I suspect he was half in earnest when he wrote, "Stupidity has saved many a man from going mad." Under favorable conditions of education and environment the hypersensitive organisms may make the most lovable, because the most responsive, representatives of our race; but they must live in an atmosphere of love. They do not well resist temptations and they are not good protectors or steady friends.

The same unstable neurons which furnished a fickle, varying innervation to growing and developing organs that needed a steady, fairly proportioned blood supply, will again manifest their weakness in the fickle conduct of the individual, a low resisting power to temptation, and widely varying emotional states.

In brief, it is the theory that the signs of degeneracy and the "neurotic temperament" are not necessarily related as cause and effect, but are different manifestations of an unstable brain, though it is held, we think with reason, that the premature synostosis of the anteroposterior suture of the skull said to produce ultradolichocephaly, and the too early union of other bones of the head and face, producing irregular anomalies of cranial and facial outlines, are factors in crowding parts of the brain, thus preventing its harmonious development.

While I have purposely called attention to the salient points emphasized by those writers who have given the subject most attention, I accept their teachings as food for reflection and guides for observation, rather than firmly established laws. One who is interested in the subject may be surprised, when riding first class in a railroad coach, to see so many ears standing at nearly right angles from the mastoids. Even in church he may be guilty of allowing his gray matter to register more impressions from the anatomical outlines of the heads in the audience than from an excellent sermon. The conviction may be forced upon such an observer that Lombroso is right in his pessimistic views concerning degeneracy of the human family, or he may conclude that there is no truth in the theories which have been built upon the so-called science of anthropometry.

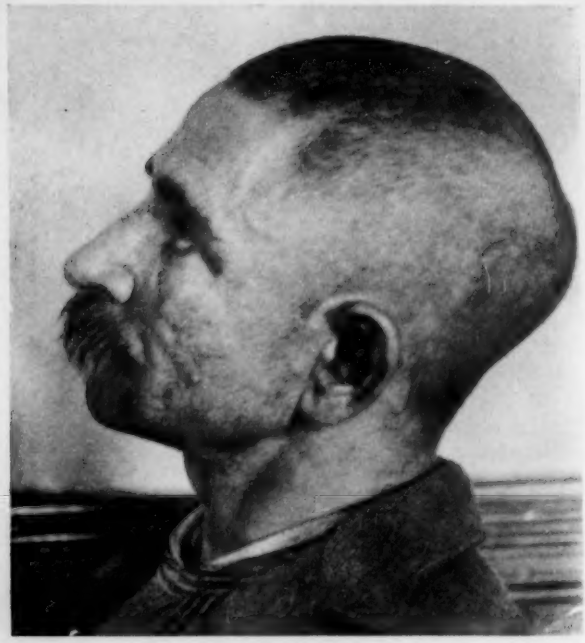
Certainly he will learn not to put much stress upon ears which stand out nearly at right angles from the head nor to those with adherent lobes. But if he has an opportunity to attend a Chapel service where several hundred men with a criminal history are assembled, he will be convinced that in the so-called "stigmata of degeneracy" there is a real significance, though its claims may have been exaggerated. The contrast is so sharp, the departures from the ideal head and face are so much greater and more frequent, that he will no longer doubt the more than accidental relationship of an unstable nervous organ-

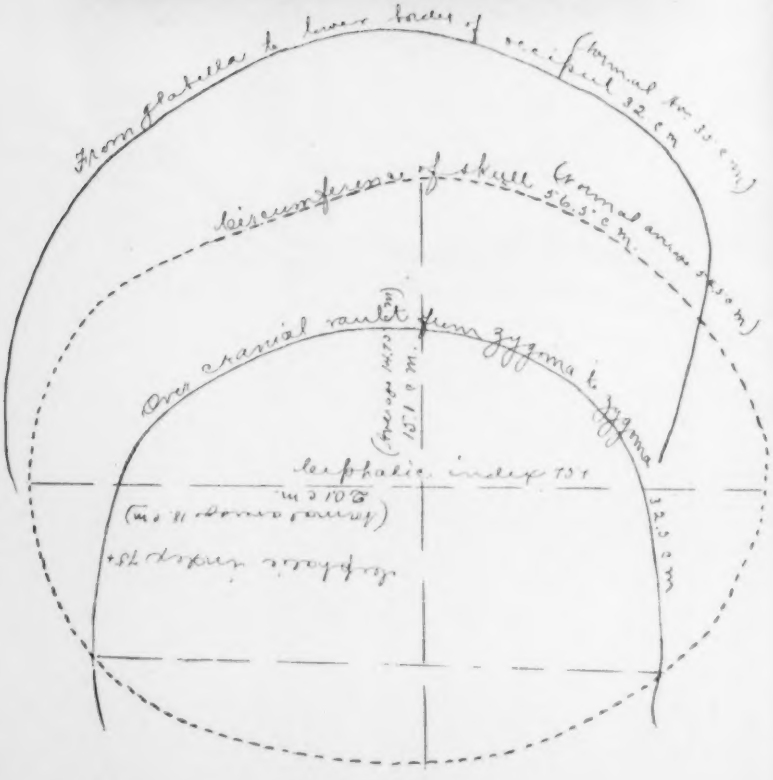
ization, with its potential criminality, to the undeveloped or maldeveloped ears, noses, jaws and crania which he sees about him.

I am under obligation to my medical assistant, Dr. Metzger, for painstaking records of anomalies of physical development on which my statistics are based; also for the photographs which he took, with one exception, and to other non-medical assistants for substantial help in taking cranial measurements.

CASE No. 1.

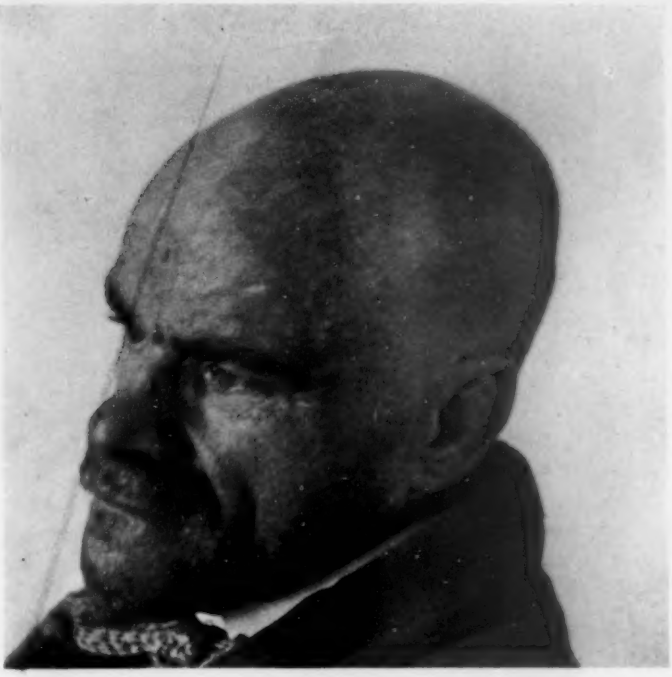
Imbecile and Epileptic.

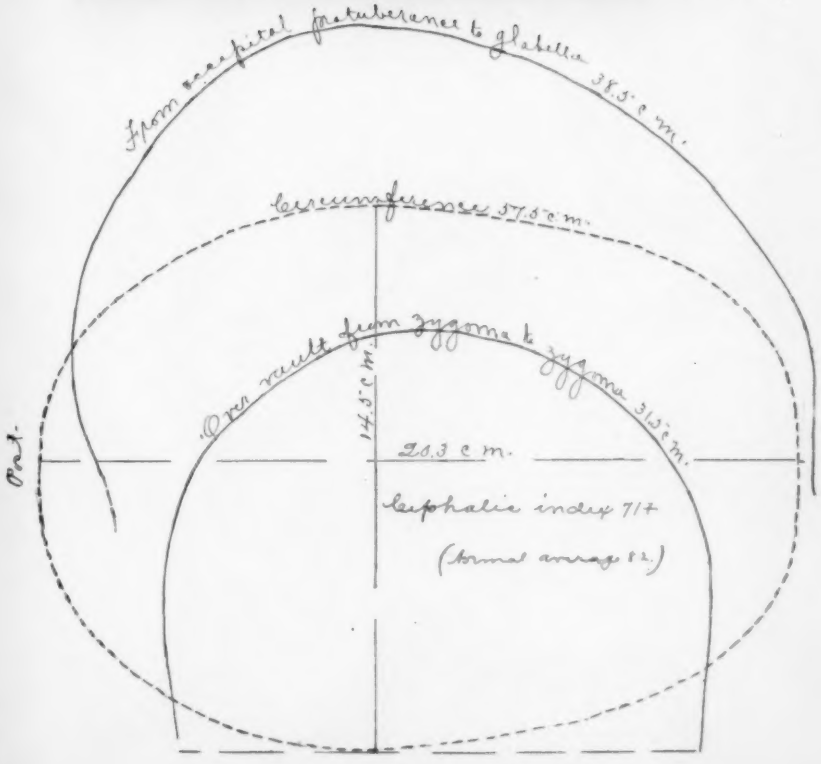




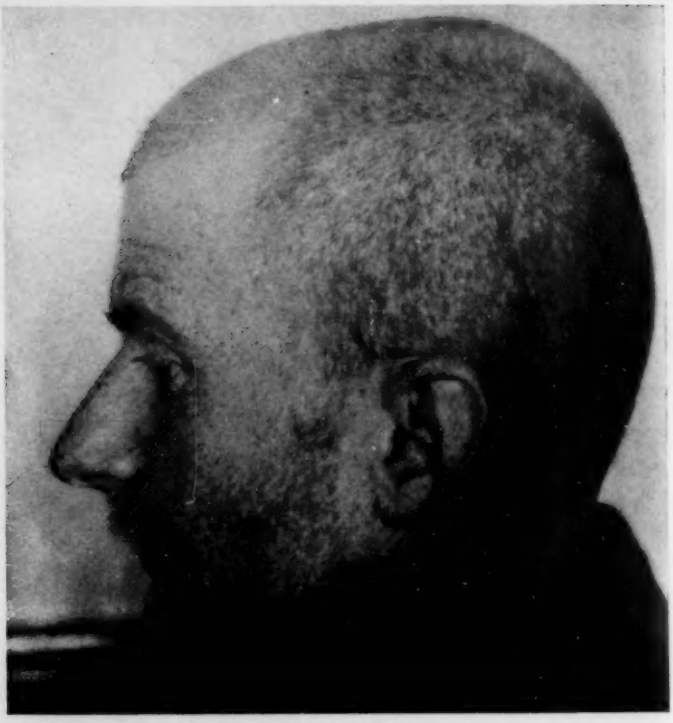
CASE No. 1.

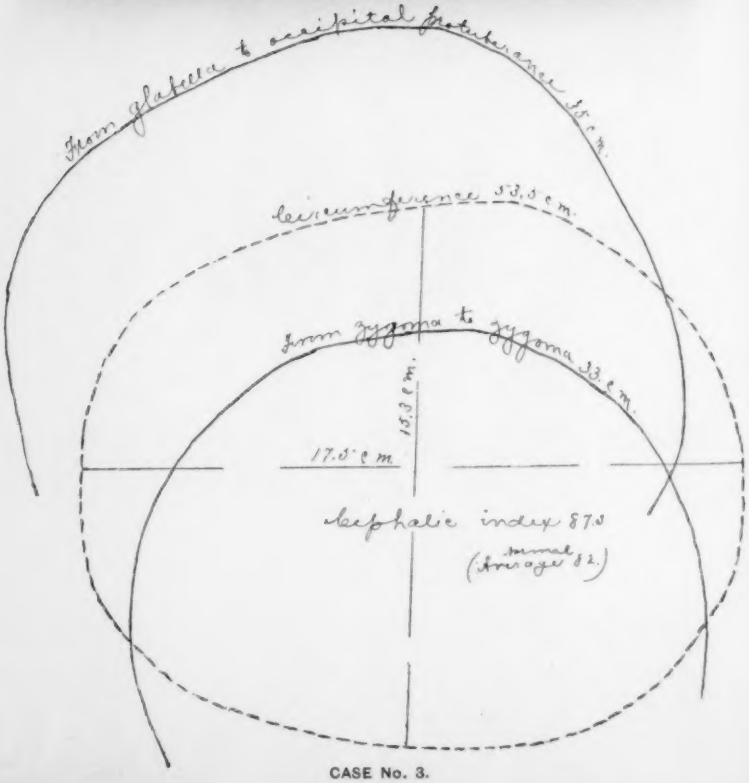
Imbecile and Epileptic.



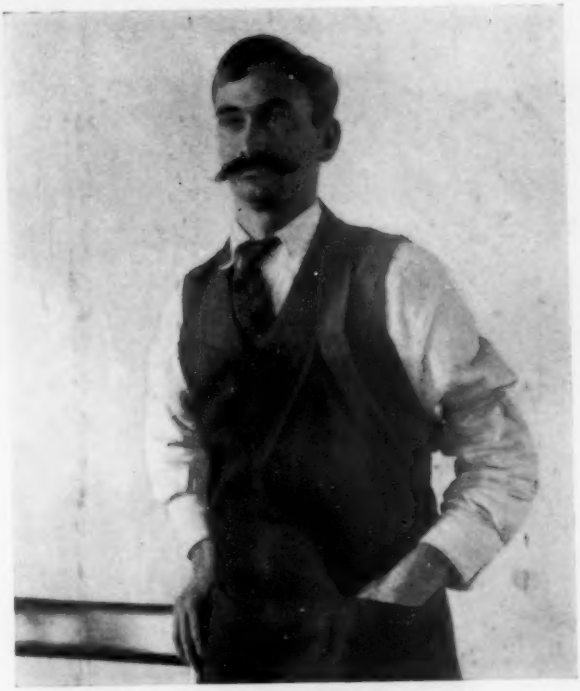

from occipital protuberance to glabella 38.5 c.m.
circumference 57.5 c.m.
area result from zygoma to zygoma 31.3 c.m.
14.5 c.m.
20.3 c.m.
cephalic index 71+
(normal average 82.)
Part.

CASE No. 2.

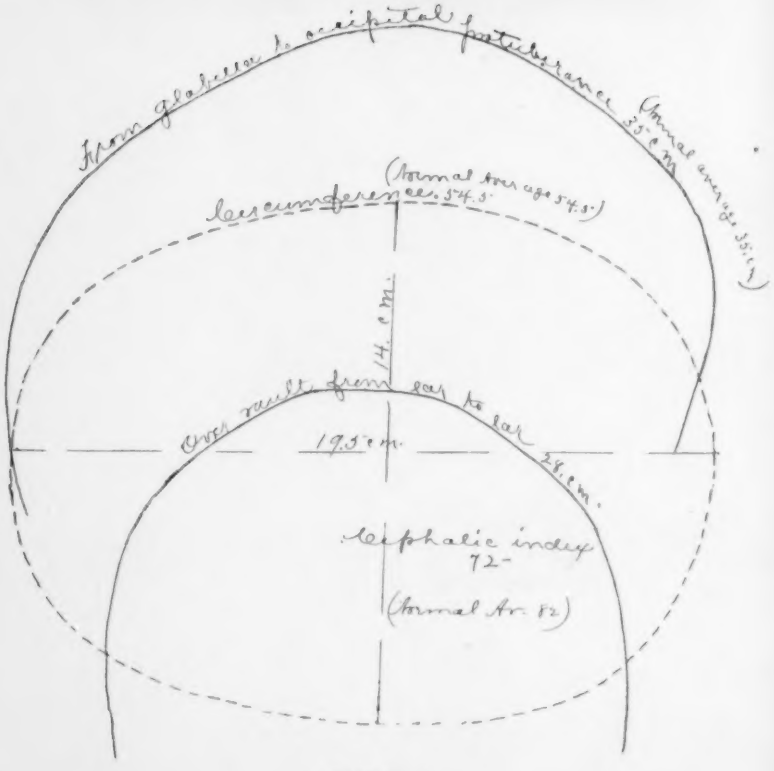



from glabella to occipital protuberance 35 c.m.
circumference 53.5 c.m.
from zygoma to zygoma 33 c.m.
15.3 c.m.
17.5 c.m.
cephalic index 87.5
(normal average 82)

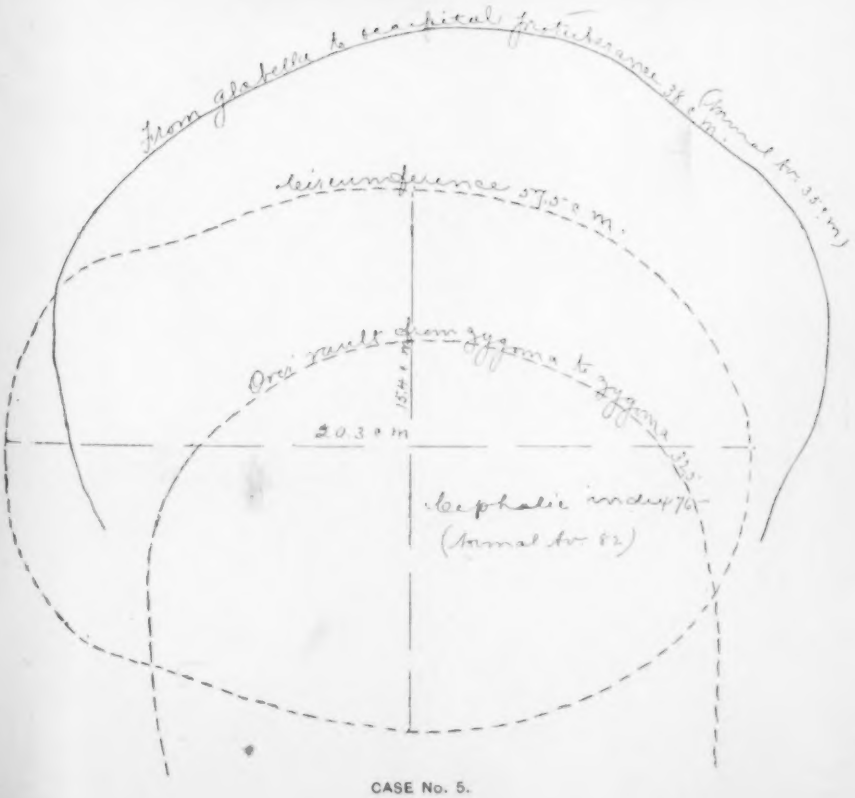
CASE No. 3.



CASE No. 4.

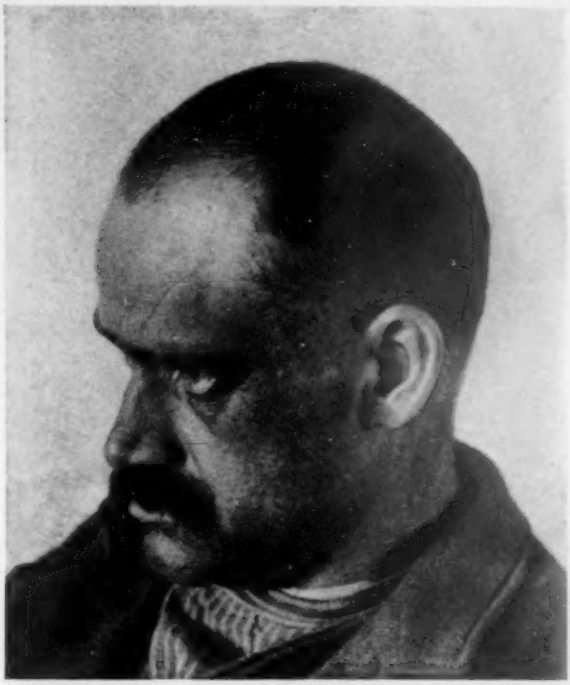

from glabella to occipital protuberance. (Normal average 35.5 c.m.)
(Normal for age 54.5.)
Circumference. 54.5
14. c.m.
Over vault from ear to ear
19.5 c.m.
28. c.m.
Cephalic index
72-
(Normal Av. 82)

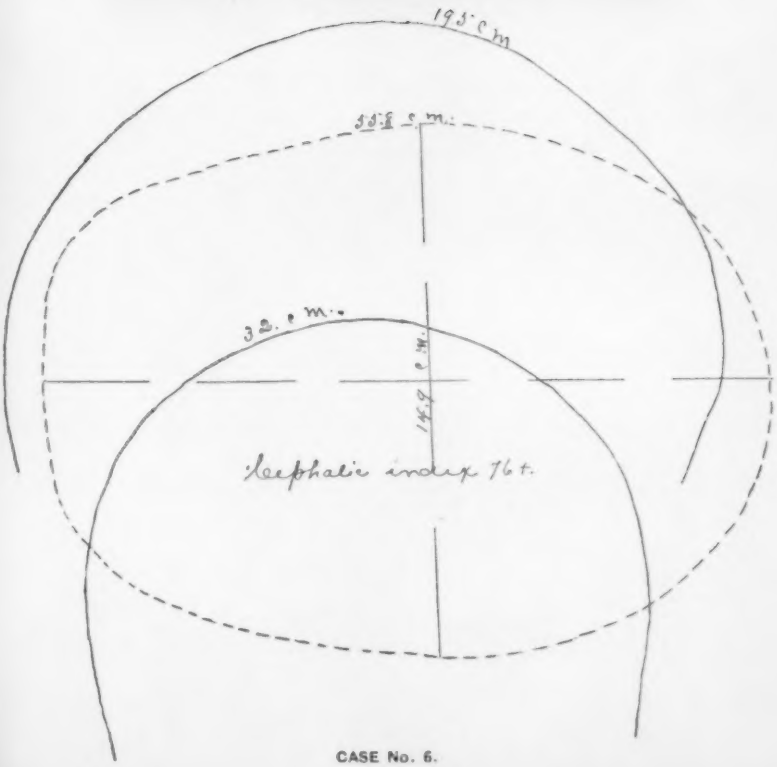
CASE No. 4.


from glabella to occipital protuberance 37.5 cm. (normal for 35 cm.)
circumference 57.5 cm.
Ora vault from zygoma to zygoma
15.4 cm.
20.3 cm.
Cephalic index 74
(normal for 82)

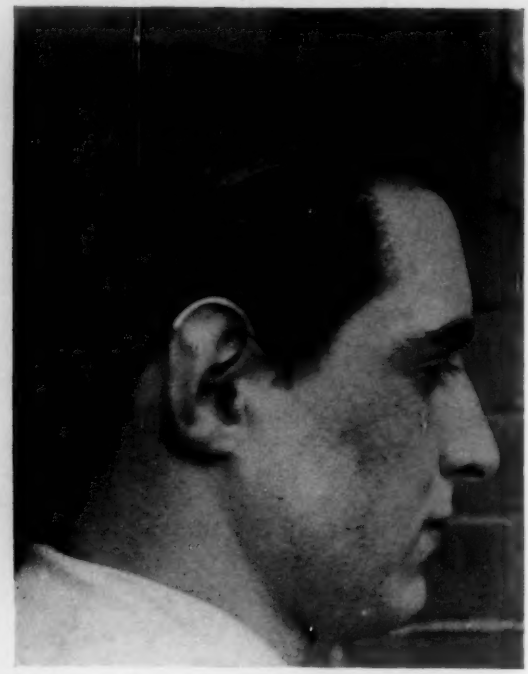
CASE No. 5.

CASE No. 6.





CASE No. 6.



CASE No. 7.

CASE No. 8.

Notes and Comment

THE CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.—Dr. Frederick Peterson, President of the Board of Managers of the Craig Colony for Epileptics, at Sonyea, N. Y., offers a prize of $200 for the best original unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition. All manuscript should be submitted in English. The prize is open to universal competition. Each essay must be accompanied by a sealed envelope, containing the name and address of the author and bearing upon the outside a motto or device, which is to be inscribed also upon the essay. All papers received will be submitted to a committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the Board of Managers of the Craig Colony, October 8, 1901.

Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th Street, New York City, on or before September 30, 1901. The successful essay becomes the property of the Craig Colony and will be published in its annual report.

THE CASE OF JULIA B. FRENCH.—There has recently been decided, after protracted hearing in the Suffolk Probate Court of Boston, a case that has attracted considerable popular and professional attention. Under a new statute, Judge Robert Grant had appointed a temporary guardian over Mrs. Julia B. French, widow of Benjamin French, a well-known and wealthy Boston merchant, on the application of her son, on the alleged ground of insanity. The expert witnesses on that occasion were Drs. Edward B. Lane and G. Alder Blumer, both of whom testified that the woman was a paranoiac, a diagnosis of which there was apparently no room for doubt. Dr. Lane had had previous dealings with Mrs. French in proceedings growing out

of the death of her husband when her sanity was in question, and Dr. Blumer based his opinion upon an examination held two days prior to the hearing.

In January last the case came again before Judge Grant upon an application to make permanent the guardian whom he had temporarily appointed. The petition was hotly contested on behalf of Mrs. French by Mr. R. M. Morse, a leader of the Suffolk County bar, while the well-known firm of Messrs. Whipple, Sears and Ogden represented the petitioner, Mr. Wilfred A. French. Mrs. French being a woman of considerable wealth and notorious in the courts as a litigant, the proceedings furnished sensational copy for an eager press. During the past ten years she has appeared as plaintiff or defendant in no fewer than thirty-six lawsuits.

Dr. Blumer testified as to Mrs. French's delusions of persecution freely expressed under his examination. There had been attempts to poison herself and her late husband, made (she affirmed) at the instigation of her son in which he was aided by Mr. French's attending physician, who, as the price of his villainy, had received a sum sufficient to purchase his Beacon Street residence. A plot to compel her to marry her choreman was also unfolded. It was not necessary, Mrs. French understood, that the choreman should be present to make such a marriage possible. She had seen her son deliberately shoot a man in a distant candy factory from the roof of her Newbury Street residence. Grandiose delusions were shown in her statement to the witness that Queen Victoria had invited her to spend a night at Windsor Castle but urged her to tarry five days, that she knew the Prince of Wales intimately, that she had been entertained by the Emperor of Germany, that as a child she had been stood upon a table to sing the Marseillaise to Emperor Napoleon. Mrs. French lived all alone in a large house in a fashionable street, would allow but few persons to have access to her, was without the ordinary conveniences or even decencies of life, and was manifestly controlled by systematized delusions. After the death of her husband she kept the corpse in a rough pine box in the house until the authorities interfered. The woman impressed Drs. Lane and Blumer as a typical paranoiac and a marked example of the litigious variety.

The medical witnesses for the defence were Dr. Thomas Waterman, one of the examiners in lunacy for the city of Boston, and Dr. Isaac Hills Hazleton, "for forty years an insanity expert." According to a newspaper account Dr. Waterman found Mrs. French "mentally sound and a woman of remarkable parts." Dr. Hazleton had had long interviews with Mrs. French. "No delusions were noticeable and he pronounced her perfectly sane." The reporter of a sensational newspaper, who swore that he was concealed in the hall during Dr. Blumer's examination of Mrs. French in her house, and overheard all that was said, taking notes in his hiding place, contradicted Dr. Blumer's testimony. The testimony of the hospital nurses temporarily in charge of Mrs. French confirmed that of Drs. Lane and Blumer. And at the conclusion of the trial Judge Robert Grant, the eminent jurist and author, delivered his decision in these words:

"After a full consideration of the evidence in this case I am of the opinion that Julia B. French, though an eccentric woman, is not of unsound mind, and does not require a legal guardian. Harmless delusions and an eccentric mode of life do not necessarily indicate legal insanity, nor would this court be justified in depriving a woman of the conduct of her own affairs merely because she was suspicious, litigious and difficult to deal with.

"It is highly significant in this case that the chief petitioner, Wilfred A. French, is her son, between whom and his mother there has been mutual discord of a serious character for a number of years. This proceeding is the culminating step in a series of litigations which he has brought against her or the estate of her late husband, his adopted father. But for his animosity toward her, it is not probable that her peculiarities would have been brought to public attention.

"It is therefore decreed that this petition be dismissed, and the respondent be, and she hereby is, discharged from the temporary guardianship now in force."

If the dictum of Judge Grant in this case be considered the legal view of insanity and responsibility, it is difficult to understand why the opinion of competent alienists should be sought in any case when the presiding judge is able or believes himself able to determine what delusions are "harmless" and not indica-

tive of an "unsound mind." It is manifestly a waste of time to listen to the testimony of any alienist. Why go through the farce of calling an expert?

THE CARE OF "OBSERVATION" CASES AND OF PERSONS SUFFERING FROM DELIRIUM TREMENS IN BOSTON.—The JOURNAL OF INSANITY is indebted to Dr. Henry C. Baldwin, of Boston, for copies of various papers dealing with this important subject, which for more than a year has occupied the attention, more especially, of the members of the boards controlling the public institutions of Boston. From these documents it would appear that for some time past—since 1894—persons, in whom insanity is suspected but not definitely proved and those apparently suffering from delirium tremens, when arrested by the police, after being examined at the city jail by a physician appointed for this purpose, are sent for temporary detention and treatment to the hospital on Deer Island. On recovery they are either set at liberty or, if there be any criminal charge against them, are returned to the city jail. But inasmuch as this hospital forms an integral part of the House of Correction for the county of Suffolk—a penal institution—and inasmuch as in strict law the institution known as the Observation Hospital on Deer Island has no existence, it has been urged that the sending there of patients who have not been duly committed by the court is absolutely illegal. Moreover, entirely apart from these considerations, it was pointed out that the transportation to Deer Island inflicts unnecessary suffering upon the patients, besides involving a serious delay in cases in which immediate treatment is of the utmost importance.

In this connection a committee appointed by the Boston Society for Medical Improvement to consider the most efficient measures for the Receipt and Care of Cases of Suspected Mental Disease reported as follows:

"1. While believing that theoretically the best plan for the temporary care and relief of cases of suspected mental disease might under certain circumstances be their reception in separate wards or buildings in immediate connection with the Boston City Hospital, we find that this plan is at present absolutely impracticable.

"2. The Committee finds that there are two classes of cases of suspected mental disease which should be cared for separately.

"For the violent, dangerous criminal and those coming into the hands of the police we recommend a Reception House in the central portion of the city and endorse the plan proposed by Mr. Marshall [the Commissioner of Penal Institutions].

"3. For the mild cases of suspected mental disease such as present themselves frequently at the Out-patient Departments of the larger medical institutions and elsewhere, we believe that the best practicable plan at the present time is the establishment of a private institution on the lines laid before this Society by Dr. Channing and we suggest that measures be taken for the furtherance of this plan."

Despite this report, however, at a meeting of the Quarterly Conference of Public Institutions, held in June, 1900, a committee was appointed to attend the next meeting of the Trustees of the City Hospital and ask "that said trustees give favorable consideration to the request previously presented to them by the conference; namely, that cases of delirium tremens and cases for observation regarding their mental condition may be sent directly to the City Hospital." A somewhat lengthy communication from the trustees of the City Hospital, in which they regret their inability to comply with this request, and give reasons for their attitude concludes as follows:

"The work which you seek to have done is not only complicated and delicate, but is considerable in amount. It appears that about one thousand persons have been examined in a year as possible insane cases, and upwards of two hundred cases have been sent to the Observation Hospital now established at Deer Island, where they have been detained upon an average of more than sixteen days each, or a total of more than 3300 days. Should a department be established in connection with the City Hospital as suggested, it is inevitable that the work would be found largely to increase.

"The care and treatment of the Insane, including both the cases ordinarily so called and those who become temporarily insane from the effects of alcohol, have ever been kept distinct and apart from the care and treatment of the sick so-called.

Insane hospitals are not made a part of general hospitals. The insane and alcoholic patients require differently constructed buildings and different fittings and appliances. They demand specially skilled physicians for their treatment and need the watching and supervision of house officers, nurses and attendants specially trained for their care. They cannot mingle with other patients, and their near presence, especially the presence of wild and noisy victims of alcoholism, have a most disturbing influence upon the sick in general wards. The City Hospital has not the requisite accommodations or services for these classes of mentally diseased, and the trustees would deem it unwise, if not dangerous, for them to attempt to assume the responsibility of their care and welfare.

"The existing wards of the City Hospital are already overcrowded and additional room is demanded, not only for more patients, but also for the better classification of diseases within the sphere to which the hospital can be extended. Our limits are circumscribed, and the little vacant ground left is not too large to complete the plant which the trustees believe necessary in order to make the institution a well-rounded general city hospital.

"The trustees are deeply sensible of the confidence in them which you have expressed, but they have been compelled to the conclusion, after much consideration, that they are not permitted, under their present organization, to undertake the work, that the City Hospital possesses neither adequate nor proper buildings and facilities nor the necessary grounds in which to supply them, and that the care and treatment of these classes, being entirely distinct and apart from the general hospital work for the sick, which calls for their best endeavors, should be carried on in a different locality and under different agents, and entrusted to the supervision of an independent board composed of members who have made a study of the diseases of alcoholism and insanity.

Most sincerely yours,

(Signed) A. SHUMAN,
President of the Trustees."

To this the Committee, Doctors Baldwin and Fowler, replied that inasmuch as 178 cases of alcoholism had been treated in

the City Hospital during the preceding year, the admission of a few additional cases could be readily provided for by an increase of 10 beds, for which funds might be obtained from the city of Boston. It was urged, moreover, that "the trend of intelligent opinion among medical men to-day goes further than urging general hospital care for cases above-mentioned" and various authorities were quoted in support of this view. The communication concludes as follows:

"In view of the facts presented in the City Hospital Reports, the small number of cases under consideration, the proposed new buildings for the hospital, and the present movement in other cities among medical men for the proper provision of this class of cases in general hospitals, the conference ask the trustees of the Boston City Hospital to make further consideration of the matter."

Furthermore, in a letter dated Jan. 28, 1901, Dr. Henry C. Baldwin emphasizes and elucidates several points in connection with the recommendation made by the conference:

"First. This request is not a personal matter whereby any board asks to be rid of a burden or, in fact, is embarrassed by the present arrangement. It is a question, in the first instance, of humanity, and, in the second place, of legal status—the present arrangement being manifestly a cruel wrong to sick people and a flagrant violation of law.

"Secondly. It is a crying present need for which we ask the aid of the City Hospital now. It is not a matter that can be postponed for future legislation. Present action is needed, and the legalization can wait. The City Hospital was established and is maintained by the people to care for the dangerously sick, whether deserving or undeserving. The man who breaks his leg while drunk ought to be excluded as much as the man who is acutely sick with delirium tremens.

"Thirdly. The class of patients for whom we are asking hospital care is a very limited class. It is possible that the trustees do not realize how limited it is. In order to come into this class, the person must first be arrested; he must then be examined by the regular medical examiners (Doctors Jelly and Waterman), and found to be acutely sick from delirium trem-

ens or sick from some mental trouble—in most instances due to alcohol—which cannot be pronounced insanity at the time, and generally clears up and gets well in a few days. Moreover, this class of cases limited because they are police cases and because they are limited by medical examination, are still further limited because they must have city settlements, the State cases being sent at once to Tewksbury.

"In view of the inhumanity, the flagrant violation of law, and the small number of cases, it is hoped that the trustees of the City Hospital will be able to provide now for these cases, and seek in future legislation any relief that may become necessary.

"The present interest in this question on the part of the people in the community is shown by a recent letter written by Dr. Channing asking that an observation ward be connected with the City Hospital for the care of this class of cases, and by the vote of the Boston members of the Massachusetts Civic League at a recent meeting that the trustees of the City Hospital be asked to care for cases of delirium tremens and cases for observation regarding their mental condition which are now inhumanely and illegally sent to Deer Island."

To this the authorities of the City Hospital rejoined in defence of their position, laying special stress upon the fact that cases of delirium tremens or of suspected insanity were never (except in very exceptional cases) admitted as such.

In support of these allegations they submitted the following table of cases admitted to the wards in question:

Erysipelas	10
Urinary and like offensive diseases	9
Ulcers and wounds, offensive to the smell or otherwise	16
Pneumonia accompanied with delirium	14
Burns	5
Tumors	2
Meningitis	2
Scalp wounds and fractures	8
Miscellaneous	8
Total	74

"Of these there were 6 cases of scalp wounds and fractures and 2 cases of pneumonia in which delirium tremens or a milder form of alcoholism developed after admission. There was no case of delirium tremens primarily or suspected insanity, and it is seldom, as has been previously stated, that there is a single such case in these wards or in the hospital.

"These wards are usually fully occupied, and, as constituted, are not only an important, but an indispensable, part of the hospital. They are old and have had constant and hard service, and there has long been need for their being rebuilt. The money appropriated will only suffice properly to replace the old wards for the care of a class of patients whose treatment in such a manner as is here afforded is an absolute necessity."

We regret that it is impossible to give here in full the contents of the various documents dealing with the present friendly controversy, which is still going on. The whole discussion centers round the all-important question, whether general acute hospitals would be able—even if separate special pavilions were provided with the necessary staff of attendants—to properly care for these cases, without great detriment to their main work. It must be evident that the greatest good for the greatest number must ever be borne in mind—here no less than in other matters—and must largely influence us in arriving at a conclusion upon this important question. Some of the same authorities are quoted by either side as favoring their views, but to the impartial observer who reads between the lines it would seem that not a little ambiguity has necessarily resulted from the desire of eminent alienists that at least something should be done, and from the fact that some of their expressed opinions may unconsciously have been prompted by the idea that at the present time some compromise must be made. As a matter of fact, it is probable that some years of further experiment will be necessary before a satisfactory solution of this question will be arrived at. In Boston the matter is still under advisement, and rightly so, for it is one which should certainly not be passed upon hastily or without due consideration.

In the present controversy there is no endeavor being made by either side to shirk responsibility, and these honest differences of opinion are not to be regretted, since they can only

tend to a more careful examination of every phase of a question upon which depends the welfare not only of the unfortunate sufferers concerned but also of the patients in our general hospitals as well as the public at large.

THE CHRONIC INSANE AT HOME AND IN PUBLIC INSTITUTIONS.—We have rarely seen the relations of the chronic insane to his friends, to the community at large and to the State instition, more pithily and thoroughly discussed than by Dr. E. A. Christian in his report as Superintendent of the Eastern Michigan Asylum at Pontiac. We commend his broad-minded and philosophical attitude to all who have to do with the care of the chronic insane and especially to those persons who believe or affect to believe that institutions are filled with those who could be better cared for by their friends at home. He says:

The ever-recurring importunities to make room for patients; the provisional removal of some chronic cases to county-houses, only to have many of them thrust back again upon the asylum as unsuitable for care there, the experimental withdrawal of others by friends, with more or less resulting disappointment, have resulted in making prominent some matters that are of more than medical interest to the community. Social development has for its ultimate aim the greatest happiness, the greatest individual ease and liberty for the greatest number consistent with the rights of the majority and of public order, and can progress towards this goal only through the constant suppression of the individual, and his willing or unwilling sacrifice to wider interests. In the pioneer stage of society we find that the restless and the unsettled, those lacking mental poise, and those constitutionally hostile to social restraint, have fled from the more rigid regions of law and order, even as their virile, aggressive and ambitious brethren have for other and better reasons. With broad lands and abundant room for both, there arises no friction so long as order and the rights of each other are respected. The hardships and the discomforts of a pioneer life breed charity and toleration in the stronger for the weaker. In the next generation the more prosperous descendant of the virile stock, in more impersonal relations with the degenerate offshoot of unsettled parentage, sees less room for toleration and a wider scope for charity, which latter in his eyes becomes of wider content and embraces not only the keep and care of the weakling, but the preservation of the comfort of the majority. This is not fanciful; this is history. The litigious man who forty years ago was humored and cajoled into harmlessness, or the vagrant woman who was permitted to wander from town to town, receiving a few days' board here and there, with or without work, is an intolerable misfit in the more con-

solidated society of to-day. Communities will not tolerate them. And why should they? If this incompatibility is due to a mental incapacity, to an inherent defect in the individual that places him constantly or periodically out of harmony with existing order; if he has limited or no capacity for adjusting himself to existing conditions, then the sacrifice of the individual is inevitable. It is only when commitments to the asylums become restricted by lack of room that these facts are brought forcibly out. The community chafes and rebels against the inconvenience. County authorities are brought to book, and they in turn importune the asylum authorities to make room for these misfits of society, whose care in some cases seems to them even more urgent than that of the acutely insane. It is vain to rail against it. It is a fact in the order of affairs which must be recognized. In these cases the pressure comes not from the relatives so much as from the neighbors. The unfortunates are taken into custody because they frighten children, or because they have used threatening language—often vague, perhaps, or because the neighborhood has been visited by fire, and suspicion more or less unfounded has been directed against them. Once in custody they are declared insane, and their numbers, constantly increasing, account in a measure for the so-called increase in insanity. The taxpayer groans, but it is the taxpayer himself who clamors for relief from these annoyances and wishes the community rid of them.

Next we are led to the reverse of the picture. Our unfortunate having submitted to the inevitable, becomes in time an orderly unit in an organic whole. The engine that pounds and runs riotously, wasteful of energy and destructive of its own parts when in the hands of a novice, may yield to the more expert hand of the chief, responding in quiet, smooth and efficient service; the reason for all of which may in no particular lie in the engine. The brain is a machine. Lacking a governor it reacts in a more or less turbulent manner to irritating agencies. Brought under expert influences, order is likely to be substituted for confusion. The obviousness of this is usually overlooked. The prying and teasing of neighborhood children is replaced by the tactful attention of trained attendants; the exasperating brusqueness and the arbitrariness of acquaintances too busy to be bothered give way to the sympathetic tolerance of those whose business it is to listen, understand and guide. The crippled mind, driven to confusion in its efforts to keep pace in a competition which it recognizes but with which it cannot cope, finds at length, in the institution, routine, order and discipline. Is it any wonder, then, that a change is wrought? Scarcely. But here comes the rub. The agencies that have wrought the change become the object of caviling. The institutions are charged with harboring large numbers of people who are " only mildly insane." Many are cared for at public expense, it is asserted, who are capable of self-support. The very liberty accorded to many of these patients as a therapeutic measure (a creditable distinction of modern methods) becomes the chief occasion for the complaint.

The man who works on the farm, the man who cares for the stock, the man who assists the bookkeeper, the man who is permitted to embark in the harmless mercantile pursuit of distributing daily papers to the asylum household, are pointed to as men capable of supporting themselves because they work in the asylum. No account is taken of recurring periods of psychical storm that now and then interrupt the labor, nor of the discrimination called for in discovering the kind of employment adapted to the limitations of each crippled brain. In the experience of every superintendent there are included many disappointing experiments made in the direction of retransplanting these cripples to an environment of less dependence. In this asylum during the last year alone there have been 42 returns of patients whose friends had removed them experimentally. To this number should be added 19 others, re-admissions of patients discharged during a previous fiscal year.

To what extent are the asylums forced to maintain patients who might be cared for by friends? I know that to even the trustees visiting the wards and talking with patients this question often recurs. Only an intimate, daily and prolonged acquaintance with the entire asylum household is sufficient to supply even an approximately correct reply to this. That there are some it would be vain to deny. I am sure that they do not form any considerable proportion of the whole asylum population in any of the Michigan institutions. There are two all-important considerations that demand attention when we approach this question seriously: First, how are we to determine what patients can be cared for by their friends? No greater mistake could be made than to assume that any model asylum patient can be thus disposed of. Let us go back again to first principles. Insane thoughts, and, consequently, insane conduct, are a product of disordered action in an organ of exceeding complexity of structure. Within certain fairly constant channels the normal brain can be counted upon to react in a definite manner to impressions received from without. The diseased brain reacts inconstantly, because of the upsetting of the normal relations which its different anatomical elements bear to each other in the production of the various processes of thought. All psychological processes, whether normal or morbid, are in essence more or less harmonious cooperations of different parts of the brain. This brings us again to a machine with which we are dealing. Limit the impressions to be received by that brain so that its reaction to them may be simple in character, call for little or at most an unconscious adaptation to these impressions, restrain these stimuli within narrow limits and to an orderly arrangement, and we have the model patient. Restore the old order of things (I need not enumerate all the disturbing influences that are too often renewed by a restoration to home), and we may arouse old associations of thought, dormant delusions may become active, memories that had better have slumbered may awake, and our machine is again given over to rioting activities. One of the most quiet, inoffensive men in this institution to-day—a man who

might be entrusted with wide privileges were it not for his past history—is all but a homicide, his victim being left a permanent cripple. Fortunately for the reputation of the institution, the assault was made before the commitment of the patient to the asylum, but years after his insanity had first been recognized. The patient was at that time in a stage of his malady no more acute than it is now. A slight change in the order of events might have made the assault consecutive to his removal from the asylum, instead of previous to his commitment.

Even in those cases in which we are disposed to assume the risk of advising a removal on trial, we often find insuperably opposing the execution of our plans the matter of legal responsibility for support—the second important consideration alluded to above. Parents are liable for the support of minor children, and husbands, in addition, for the care of their wives; but so far as I know, there the liability ends. Only the strongest moral influences can overcome contumacious children, or the parents of those no longer minors. Married daughters not infrequently resume these obligations, overcoming whatever opposition may have been manifested by their husbands, but the daughter-in-law of an insane person seldom feels called upon to add to her household burdens by the care of her husband's insane father or mother. If it were possible to enforce this obligation, it would time and again be at the cost of the disruption of family relations.

This brings us close to another question, to the solution of which much that is perplexing attaches: the care of the aged insane—those whose minds are decaying because of old age, it is true, but whose mental powers wane in advance of physical decrepitude. We may call them dotards, and adjure superintendents of the poor and judges of probate not to send them to the asylum to occupy room that should be assigned to recent and recoverable cases; but what solution of their difficulties does this bring to the distracted and desperate friends? I have not in mind now the feeble or bed-ridden old person, but the man or woman of physical activities, unceasing if not vigorous, who resists even to homicidal assaults, who builds bonfires in the house, humiliates his children and his grandchildren by abandoned talk and conduct, who has lost recognition of the common proprieties even as he no longer recognizes his nearest friends. These are dangerous to themselves and to others. They wreck the health and endanger often the mental integrity of others in the family, and in the absence of financial means they cannot be cared for outside of a state institution.

A good many tentative removals of the chronic insane are made from time to time, and a goodly proportion of these are successful. These successes are generally to be found, I think, in the ranks of a certain class. To most people all the chronic insane are alike. There is, however, a very important distinction to be made. Excluding all those suffering from organic brain disease in its various forms, there are many of the chronic insane in whom the disease process within the brain is

continuously active over years. False interpretations of the sense perceptions, faulty association in thought, resulting delusions woven into more or less elaborate and fairly logical construction, conduct which is the valid expression of these reigning ideas, are all evidences of a still active disease. Experimental removals of patients drawn from this class are likely to result in failures.

There is, however, another large division of the chronic insane presenting characteristics which must be looked upon as significant of what are known as residuary conditions; that is to say, allowing for some reduction in the mental powers of the individual that can never be overcome—impaired judgment and weakened will; allowing also for false memories of events occurring in the active stage of the disease, which the individual has been unable to recognize as fictitious, the patient has reached a plane of comparative health. Instead of active disease we have an arrested disorder with certain incorrigible effects. Counting out the past, the individual has again become able to adapt his conduct to current experiences, often as a much changed individual it is true, and often, in fact, as actually of changed personality in his own belief. From the ranks of these we are most apt to find those who can live outside of institutions in families. For obvious reasons they are most apt to do best among strangers, or at least among those with whom they were not intimately associated during the early part of their illnesses, because false memories do not center around these latter. The boarding-out system, where it has been tried, has found its best expression in this class.

A Word of Warning as to Chloretone as a Hypnotic (Acetone Chloroform).—While so much is being written concerning the value of chloretone as a hypnotic by those who have observed its use clinically, it seems to us that attention should be called to the experience which has been had with it in many physiological laboratories. It was introduced in America by Prof. John J. Abel of the Johns Hopkins Medical School several years ago for physiological purposes and was found to serve admirably in keeping animals quiet for a sufficient time to allow operative wounds to heal without interference on the part of the animal, but when so used but a single dose was usually given and the animal was not kept under its influence continuously by a series of doses. Recently Dr. E. Impens has been experimenting with chloretone and the conclusions from his article in the Archives Internationales de Pharmacodynamie et de Therapie are as follows:

1. The quotient of toxicity of chloretone is, in warm-blooded

animals, from 1/1.76 to 1/1.68, while for hydrate of chloral the same quotient is not more than 1/4.32. Chloretone is then 2½ times as toxic as hydrate of chloral.

2. With a very small dose and at the beginning of its action, chloretone is without influence on the frequency of respiration, but it diminishes the amplitude of the inspirations. With a medium dose it is capable of producing a deep narcosis, reduces the total volume of air inspired per minute 70 per cent, the volume of individual inspirations 60 per cent, the frequency 40 per cent. It diminishes therefore considerably the pulmonary aeration.

3. Chloretone paralyzes vasomotor centers and leads to a marked dilatation of the vessels; this is followed by a notable fall in the blood pressure, a fall of about 43 per cent with a barely efficacious dose.

4. The vasodilatation is not the only cause of this lowering of the arterial pressure. Chloretone has an equally paralyzing effect on the heart. In small doses this cardiac action is slightly less marked than with chloral hydrate, but with a sufficient dose to produce any pronounced hypnotic effects it is quite as well marked.

5. Chloretone narcosis is accompanied by lowering of the temperature to below 34.5° C. [94.1° F.] in the rabbit, in the smallest effectual dose. This fall in temperature is due not alone to the increased caloric radiation, but also to a direct paralyzing action on the cellular protoplasm.

6. This influence on the protoplasm is again clearly shown by the marasmic condition in which the animals remain even for a considerable time after waking.

Finally, experience undoubtedly shows that chloretone restricts the combustion of oxygen more than 50 per cent. It is therefore clearly evident that the respiratory function of the protoplasm is interfered with.

7. In one respect however chloretone is superior to chloral hydrate. It is less irritating and has some slight anæsthetic properties. Nevertheless this fact should not enter into consideration in view of the high degree of toxicity of the drug and of its injurious effects not only on the cardinal functions of the organism but also on the protoplasm itself.

We are justified in stating then that chloretone is a dangerous narcotic, much more dangerous than chloral hydrate.

The well-known effects of the chlorine compounds in causing fatty degeneration should also be borne in mind. Recently also several articles condemning its use as a hypnotic have appeared in the Hungarischer Archiv für Innere Medizin.

In view of the efforts which are being made to bring this drug into general use as a hypnotic in institutions for the insane we would call attention to the above results and would urge the greatest caution in its employment. Several instances of its untoward effects have already occurred.

Homicide of Dr. Ralph Erskine Johnston.—Ralph Erskine Johnston, M. D., Assistant Physician at the State Hospital for the Insane, Danville, Pa., was killed by a patient April 3, 1901. Dr. Johnston was born near New Wilmington, Pa., January 1, 1867. He graduated at Westminster College, New Wilmington, at the age of 22. His medical education was obtained at the Medical College in Cleveland, Ohio, and at the College of Physicians and Surgeons, Baltimore, Md., from which institution he graduated in 1894. A short term was spent at the General Hospital in Cumberland, Md., and on September 1st of the same year he was appointed Assistant Physician at the Danville Hospital.

The insane man responsible for Dr. Johnston's death had been a resident of the institution for three years. His condition was characterized by delusions of persecution; he was quarrelsome, denunciatory and threatening, very excitable and quickly angered. Because of these characteristics he had been frequently searched; the last instance being the day previous to the assault, on which occasion all clothing was removed and, while his attention was engaged, thoroughly searched. On the day of the assault the patient complained of illness and was put to bed; he, however, requested that the physician should not disturb him. During the usual evening visit to the wards, Dr. Johnston entered his room accompanied by a nurse, despite the patient's protest, sat on the edge of his bed and endeavored to take his pulse. To overcome the patient's resistance, the nurse was directed to hold his hand, but before this could be secured the

patient had dealt the Doctor a blow with some sharp-pointed instrument on the lower left jaw, near its angle. In attempting to subdue the patient he received three additional wounds in quick succession, one in the right shoulder, one in the left hypochondriac region, both superficial, and a fatal stab wound about one and a half inches below the clavicular notch, penetrating the sternum, pericardium and arch of the aorta about one and one-half inches from its origin, the puncture being about a quarter-inch long. After being wounded, the Doctor stepped into the hall, called for assistance and re-entered the room. He immediately fainted, but soon revived and, to the suggestion that medical assistance be summoned, stated he did not think the injury serious, but at once again fainted and died in about twenty minutes. The weapon with which the murderous assault was made is in some doubt at this writing, but appears to have been the small blade of a pocket-knife found secreted in a ward settee outside the patient's room. The patient alleges in justification of the act that the Doctor was trying to kill him.

The death of Dr. Johnston was a great shock to his associates at the hospital, and they lose in him a most conscientious and painstaking associate.

THE REMOVAL FROM OFFICE OF THE PRESIDENT OF THE NEW YORK STATE LUNACY COMMISSION.—On the 20th of December last, Governor Roosevelt, as one of his last official acts as Governor of the State of New York, summarily removed from office Dr. Peter M. Wise, President of the State Lunacy Commission.

The charges were made by the Governor and appear to have been in brief: That while President of the Lunacy Commission, Dr. Wise solicited or suggested subscriptions to the stock of Copper Hill Mining Company of which he was president, on the part of the medical officers and other employees of the State hospitals; that he permitted the erection on the grounds of the State hospital at Flatbush of an experimental ice plant by a company in which he was a stockholder, and that the company was permitted to use patients' labor in the erection of the plant, and that, had the experiment been successful, Dr. Wise would have personally profited thereby.

To these charges Dr. Wise made formal answer under oath, from which we copy as follows:

"With reference to the charges as to the sale of copper stock, he denies that he solicited any physician in the employ of the State hospitals to take stock in the copper-mining company of which he was president, and alleges that if any of said officials purchased said stock, they did it on their own responsibility and probably because of his connection with the company; that he did nothing more than express his confidence in the success of the company when questioned with reference to it, and that he had an absolute right, even though a public officer, to invest his funds as he saw fit, and the matter is purely personal to him; he denies that his connection with the said company has in any way impaired the discipline or efficiency of the State Commission in Lunacy or resulted in any relations between him as President of the Commission in Lunacy and any of the superintendents or physicians within the jurisdiction of the Commission to the detriment of the State or the patients committed to the State or private hospitals. He alleges that there are 169 resident officers of State institutions within the jurisdiction of the Commission in Lunacy, of which number, to the best of his knowledge, but sixteen own stock in the Copper Hill Mining Company, and that of said sixteen he only conversed with six upon the subject.

"With reference to that portion of the charges relating to the construction of an ice-house for the Long Island State Hospital at Flatbush, he denies that he directly or indirectly used the credit of the State to procure goods or merchandise for the benefit of the International Ice Company; he denies that he entered into any contract on behalf of the State for the erection of the said ice-house, and alleges that the same was erected by the International Ice Company with the permission of the Board of Managers of the Long Island State Hospital, and it was distinctly understood and agreed that neither the said hospital nor the State should be subjected to any liability. He alleges that the hospital on Ward's Island had been paying $4 to $4.50 per ton for ice, and that the International Ice Company offered to erect a plant for the production of ice at the cost of about 25 cents per ton. He denies that he authorized the International Ice Company to construct the ice-house upon the grounds of the Long Island State Hospital at Flatbush, but that the same was

erected with the permission of the managers of the said hospital and for the purpose of testing the practicability of the plant proposed by the International Ice Company for the manufacture of ice at about 25 cents per ton; that he had no interest, direct or indirect, in any agreement made or proposed between the said ice company and the State of New York or the hospital or its Board of Managers; that he was not, directly or indirectly, interested in any plan or agreement for the purpose of selling to the State or the State hospitals the said patent of the International Ice Company, nor did he, nor could he, have derived, directly or indirectly, any profit from any agreement or contract entered into between the International Ice Company and the State of New York, and that his sole and only connection with the matter was an honest intent and desire on his part to reduce the cost of ice used in the State hospital, especially at Ward's Island, and to secure for the use of the State ice at the very smallest possible price of production; he denies that the credit of the State or the State Lunacy Commission was used or pledged in any manner for the purchase of material or payment of labor in the construction of the said ice-house, and that neither the State nor the State hospital was to be subject to any liability unless the said plant was successful and capable of producing a sufficient quantity of ice at the price indicated.

"He alleges that neither the State nor the said Long Island Hospital, nor its Board of Managers, nor the State Lunacy Commission is under any obligation or subject to any liability to pay anything on account of the said experiment or for the labor or materials used in construction of the said ice-house."

There are certain incidents connected with Dr. Wise's removal which we think deserve some passing comment.

On December 10th and 11th, it appears that Dr. Wise was called before the Governor to explain these charges and certain letters and documents which had been placed in the Governor's hands. He appears to have very fully explained his position to the Governor, going somewhat into detail both as to his conduct of his office in regard to the particular matters in question and as to his private business affairs.

This conversation was taken down by the official stenographer, whether to Dr. Wise's knowledge does not appear, and was,

as far as our information goes, outside the letters and other documents belonging to Dr. Wise which were in the Governor's possession, the only evidence against him. Certainly, if Dr. Wise was not informed in advance that whatever he said would be used against him and that a sworn stenographic report of his conversation would be so used, he was treated in a decidedly unfair manner.

Dr. Wise in his answer refers to this in the following terms: "He respectfully and firmly protests against being tried by his accuser upon evidence not submitted to him; he protests against being compelled to defend charges made by unknown informers, and insists that he shall have the constitutional right of confronting his accuser and examining him; he protests against being compelled to defend these charges upon the testimony of himself alone, and insists that the right to call witnesses in his behalf shall be afforded to him and that a sufficient time be allowed him to procure their attendance for such purposes; he protests against being tried by the Governor, for the reason that the Governor has not jurisdiction to try him nor power to appoint a successor."

All must regret most keenly the unfortunate and unhappy termination of an official career which, up to the time of the presentation of the charges in question, had reflected credit alike upon the lunacy administration of New York and upon the head of the Lunacy Commission. We cannot for a moment believe that in advising or appearing to advise subscriptions to the stock of the Copper Hill Mining Company of which he was an officer, Dr. Wise felt or appreciated that he was placing himself in any way under obligations to the subscribers or that the obligation would be enforced by them in any relations which he might have in an official capacity with these subscribers. The same may be said of certain loans which he is charged with soliciting from his professional friends. It was unwise, as the sequel shows, very unwise, but we cannot believe that he felt that he was placing himself under anything more than personal obligation had the loan been granted.

To return to the matter of the copper stock, as we have already intimated, we do not think, and we believe the Governor would concede this, that Dr. Wise for a moment realized that he was placing himself in an equivocal position when he advised or

suggested subscriptions. If we admit that he did, it would then be equally just to assert that all the subscribers to the stock felt that they were obtaining for their subscriptions not only the chance of prospective benefit from the income from the mine but an immediate benefit in the hold which the subscription gave them upon the mind and conscience of their superior in office.

There is another aspect of this case which we believe needs the attention of Dr. Wise's former associates in the Lunacy Commission and of his successor in office. It is openly admitted that the correspondence and memoranda used by the Governor against Dr. Wise were stolen from his desk. By whom, for what purpose, under what motive? We do not imagine that Governor Roosevelt believed that the person or persons who placed this stolen correspondence in his hands were actuated by motives which would bear a moment's scrutiny. They cared not one iota for the moral questions involved if they could strike a blow at the man, and were willing to stoop to a felony to do it. In common with many of our readers, we have received a pamphlet entitled "The Removal of Dr. Peter M. Wise as President of the New York State Commission in Lunacy." This pamphlet is composed of extracts from the news and editorial columns of various New York papers referring to Governor Roosevelt's action and Dr. Wise's position. Its animus is evident, and there is little doubt that should Dr. Wise feel it worth his while to find out who paid for the printing and mailing the pamphlets he will be able to put his hand upon the men who stole his correspondence. When they are found, an obvious duty will possibly suggest itself to the Lunacy Commission.

An Unwarranted Use of Arbitrary Power.—Since writing the above, the inaugural address of Clark Bell, President of the Medico-Legal Society, has been received, and the following extract from it may well find a place here:

> There are some public events which ought not to be ignored, and which I deem it my duty to bring to your attention. The retiring governor has, in the closing days of his term, removed from office two gentlemen, one an active and the other a corresponding member of this body, without a trial, refusing to listen to evidence, which it is claimed by each was an arbitrary and unwarranted use of power.

The one, the president of the State Commission in Lunacy, a gentleman of the highest character in the State, which leaves him remediless at law, as the law is now construed, and with a reflection upon his private character. The other, the district attorney of the county of New York, a gentleman of high social position and an unsullied reputation. The publicly assigned reasons for the last removal are such as probably would not justify a court of justice in approving of the removal if the question could be brought before a judicial tribunal. In this case the people can be asked to pass upon the merits of the case at the polls at the next election, and will probably be called upon. In the former, the office being an appointment by the governor, by and with the advice and consent of the Senate, the people cannot be called upon to pass upon it.

The incoming governor, who has already inspired men of all parties with great confidence both in his wisdom and courage and in the purity of his motives, would have a right to review and reappoint the late commissioner, but might not feel willing to do so in case he should decide that the action of the late governor was legal and that a vacancy existed. But there are circumstances attending the case that may require him to examine into the facts, especially as the present law limits those who can hold the office to a few individuals. The act limits the governor in filling this office if he should regard the action of his predecessor legal, and as creating a vacancy, to a very few men of a class created by the act, which is probably in violation of the State constitution. Outside of the superintendents of hospitals for the insane who are already in official position, there are probably not five persons in the State who are eligible to hold this office under the present law. This provision of the law, if constitutional, should at once be changed and repealed, and the present governor will doubtless so advise and may withhold action until that is done.

It is in violation of the spirit of our laws that the governor of the State should be in any sense restrained or restricted in the exercise of the appointing power in securing the most fit person in the State for any office he is required to fill.

Under the Public Officers' Law, as to the removal of officers appointed by the governor and Senate, a hearing is provided for, and either the governor may take the evidence or appoint a justice of the Supreme Court or commissioners for that purpose. The hearing being judicial in its nature, the respondent is entitled to be confronted by the witnesses against him and has the inalienable right to produce witnesses in his behalf. The law contemplates that it shall be "evidence," not merely testimony, upon which the executive shall act. In the case of the State Commissioner in Lunacy no evidence was taken. The method prescribed by law was not pursued for the judicial ascertainment of the facts. No witnesses were sworn on behalf of the State as to any of the facts stated in the charges; and the requests of the respondent to be allowed

to produce witnesses in his behalf were denied. If the governor did not act upon legal evidence, if he refused to allow the respondent to call witnesses in answer to the charges and acted upon copies of letters that had been purloined from the private desk of the respondent, and which were not duly authenticated by evidence, as has been charged, the action of the governor would not be within the purview of the law known as the Public Officers' Law and the action would be void and of no legal effect, and would not create a vacancy in the office.

ANNUAL MEETING OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, MILWAUKEE.—The next annual meeting of the American Medico-Psychological Association will be held in Milwaukee, Wis., June 11, 12, 13 and 14, 1901.

The meetings will be held at Hotel Pfister, where special rates have been secured for members of the Association. This hotel has airy and pleasant rooms and a convenient auditorium for the meetings. The annual address will be delivered by Dr. W. P. Lombard, Professor of Physiology in the University of Michigan, upon the "Re-enforcement and Inhibition of Nervous Processes."

Medico-Legal Notes

By H. E. ALLISON, M. D.,
Matteawan State Hospital.

Competency and Credibility of Insane Witnesses.—Upon the trial of the Bellevue nurse Hilliard, indicted for the murder of an insane patient under his charge, an interesting question was raised as to the admissibility of the testimony of the insane. The nurse was charged with brutally beating a patient because he would not eat his supper and of strangling him with a sheet, thereby breaking the hyoid bone and otherwise inflicting injuries such as to cause death. The District Attorney brought forward two patients who were witnesses of the affair and they were called to the stand to testify. One of them is said to have been a paretic and the other entertained the delusion that his wife was unfaithful. The counsel for the defense objected, but was overruled by the court, which stated that the Supreme Court of the United States in a similar case, wherein an insane witness had testified, had refused to withdraw the testimony from the jury. The decision of the English Appellate Court in the case of Regina *vs.* Hill, in 1851, was cited as a precedent. In this case an attendant upon the ward of a lunatic asylum was tried for the murder of a patient under his charge. In the preliminary examination of an insane witness, Donelly, it was shown that he labored under a delusion that he was possessed of twenty thousand spirits, nevertheless he knew the nature and quality of an oath and could give an intelligent account of the occurrence of which he was a witness. In the cross-examination he was asked if his memory was aided by the spirits and he replied that the spirits only assisted him in fixing the date. In the Thirty-First Annual Report of the Commissioners in Lunacy, a case is cited wherein an attendant was convicted upon the evidence of two epileptic patients, and in their

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Thirty-Third Annual Report another instance is related, in the Gloucester County Asylum case, where the testimony of an insane patient was allowed to go to the jury, with an admonition from the court, however, that it should be received with caution. It was formerly the practice in English courts of law to exclude all such evidence upon the ground of its incompetency. It was later determined that many lunatics knew the nature of an oath and that they are often capable of giving a rational account of what they may have witnessed. Modern law requires that before such testimony can be accepted the witness must be examined by the court as to the sanctity and obligation of an oath and be subject to a cross-examination to determine the question of his admissibility. Again, patients who are judged so capable are prone to consider themselves as sane and improperly detained and consequently may not entertain cordial or even friendly feelings toward institutions and attendants therein and consequently may be unconsciously swayed by a prejudice which colors their statements and affects their credibility as witnesses. It must not be forgotten that insanity affects the morals as well as the intellect. The testimony of the insane, therefore, should not be received in cases involving life or liberty, in any other sense than as corroborative and the jury should be instructed that they should determine for themselves its credibility. It is for the enlightenment, therefore, of the jury, that the preliminary examination should be held by the judge as to the insane witness's appreciation of the nature and obligation of the oath, and furthermore there should be competent witnesses to show the nature of the patient's insanity, the extent of his mental disturbance, his general character for truthfulness, his freedom from prejudice and the aptness of his powers of observation and judgment, all being aids to enable the jury to determine his credibility as a witness. In other words, the competency of the insane witness should be a matter of proof to be determined to the satisfaction of the court; the question of credibility being left to the jury. With what caution this class of testimony should be received is shown by the disastrous results which have followed the hasty acceptance of statements of paranoiacs and of hysterical women affecting the character and standing of upright and respectable members of the community. As in all

matters relating to the acts of the insane, so in those involving their capacity as witnesses there should be a rigid judicial inquiry as to the merits of each individual case before such testimony is admitted, and its weight should be left with the jury to determine. It must be remembered that no such form of insanity as monomania is now recognized wherein the patient was formerly supposed to be sane in all directions save one. Such partial insanity does not exist, but the whole mind is diseased so that no subject is entirely beyond the influence of the patient's delusions or his mental deterioration which tinges his testimony with doubt. In the case of the nurse Hilliard, among the witnesses was a newspaper reporter who had feigned insanity and had been committed to the hospital for the purpose of writing a sensational article. He told two contradictory stories, and then fled the State. The two lunatics who testified gave an apparently clear statement of what they witnessed, but the jury evidently did not attach much credence to the evidence and rendered a verdict of acquittal.

A case involving a similar question, in which a decision was rendered by the Supreme Court of the United States, wherein a lunatic was allowed to testify in a suit for damages, was reported some years ago at Washington. A surgeon of the United States Army, by a fall from a defective sidewalk, received injuries which produced paralysis and mental enfeeblement. The injured surgeon was a witness. Subsequent to the injury he became an inmate of the Government Hospital suffering from melancholia. He was also for a time a patient in another hospital for the insane. Upon the trial, physicians from both institutions testified that he was deranged, that his mind was impaired, that he had attempted suicide and was mentally confused, but that he was able to make a fair statement of the facts relating to his injury. Counsel for the defense requested the court to have the testimony withdrawn upon the ground of its inadmissibility by reason of mental enfeeblement which rendered him incompetent. The request was denied, and the Supreme Court, upon review of the case, unanimously upheld the ruling. The opinion was in part as follows:

"It is undoubtedly true that a lunatic or insane person may, from the condition of his mind, not be a competent witness.

His incompetency on that ground, like incompetency for any other cause, must be passed upon by the court, and to aid its judgment evidence of his condition is admissible.

"The general rule, therefore, is that a lunatic or a person affected with insanity is admissible as a witness if he have sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters which he has seen or heard in reference to the questions at issue; and whether he have that understanding is a question to be determined by the court, upon examination of the party himself, and any competent witnesses who can speak to the nature and extent of his insanity."

INSANITY AND CHRISTIAN SCIENCE.—By the will of Miss Brush, a Christian Scientist, and follower of Mrs. Eddy, a large portion of her estate, amounting to about $100,000, was bequeathed to a Christian Science church. The mental condition of the testatrix was inquired into before the Surrogate's court in New York City, it being alleged that because of her peculiar religious tenets she was insane. A large number of followers of the Christian Science faith were examined and many strange professions of belief were offered in evidence. Medical experts of prominence were called who testified on both sides. It seems incredible that a person in health could be so deluded as to claim that complete accordance with Mrs. Eddy's doctrines would enable one to restore a lost arm, a leg or a foot; to reunite a severed artery and check the hemorrhage therefrom; to cure advanced consumption; to live even though all the blood had been removed from one's body; to survive without the attendance of a surgeon even though one should be run over by a street car, have a leg cut off thereby and be bleeding to death; and to restore a drooping rubber-plant to vigorous and healthy growth by merely thinking about it.

Miss Brush believed she had been cured of pneumonia without medicine simply by being in accord with the Divine mind, and entertained many other cognate ideas of an impossible nature. No doubt many of the professors of this faith are neurotic, or impressionable persons to whom the elements of

mystery and superstition appeal with great force. So many waves of religious mysticism have passed over the world, deluding shallow intellects in the belief that they in some inexplicable manner have communion with the Divine Spirit, that periodical epidemics of fanaticism seem to be characteristic of the human race. The successful promoters of such extravagant and erroneous beliefs usually manage to profit financially from the credulity of their followers and the question of improper influence or insanity is raised where the disposition of property may involve the rights of others. The fact that these unusual beliefs are, as a rule, ephemeral indicates that most of their devotees are sane, as through the enlightenment of experience they become in the end convinced of the falsity of their dogmas. Unfortunately during the rise and decadence of such religious fads, irreparable harm may be done to the helpless and to the innocent. The Christian Scientists, when they profess to be divine healers of the sick, when by their representations they divert property from its natural channels into their coffers, or by their teachings invite the spread of contagious diseases, trespass upon the rights of others and become a menace to the welfare of society and violators of its laws.

Undoubtedly the heterogeneous army of "Mother" Eddy's followers embraces a great number of neurotic elements, the mentally enfeebled, the hysterical and the eccentric, besides many paranoiacs and chronic sufferers from megalomania and other forms of insanity, and when foolish or criminal acts are committed, the questions of insanity, of undue influence or of legal responsibility, are apt to be frequently raised.

Obituary

DR. JAMES R. DeWOLF.

In the death of the late Dr. James R. DeWolf the medical profession loses one of its most honored and respected members. Educated at Edinburgh, he began the practice of medicine in Halifax in 1845, but twelve years later he was entrusted with the superintendence of the Nova Scotia Hospital for the Insane, at that time just being erected. It was as superintendent of this large and important provincial charity that Dr. DeWolf spent the best years of his life and accomplished a work which should ever have a prominent place in the history of medical and charitable advance in Nova Scotia. He entered upon his duties with energy and enthusiasm, and, imbued with the then-developing idea that kindness, tact, appeal to the patient's sense of honor and of the æsthetic, counted for much in promoting recovery, he at once instituted at Mount Hope a system of treatment which was free from the trammeling influence of tradition, free from the restraint, seclusion and abuse which was even at that time still common in the institutions for the insane, and established for our Nova Scotia hospital the reputation of being one of the most advanced institutions for the treatment of the insane in the world. There still live in Nova Scotia many of Dr. DeWolf's former patients, long since happily restored to sanity, who will ever have grateful remembrance of his kind and gentle manner, his sunny and hopeful disposition, and of his unremitting endeavor to bring about recovery of the reason of the unfortunate people committed to his care. He devoted himself to his calling with a rare degree of unselfishness, and conscientiously labored, in season and out, for what he considered would lead to the betterment of the condition of the insane.

After many years of active work among the insane, he retired

to private life, but he never lost interest in the cause of the unfortunate people for whom he did so much, and up till the very last continued to post himself in the literature upon insanity, and to follow closely the work of the hospital with whose history his name is so closely associated. His death occurred on the 5th of March, at the age of 82.

A well merited eulogy in the columns of the *Acadian Recorder* concludes as follows:

"Of Dr. DeWolf's personal qualities it is not necessary now to speak at length. His amiability of character; his solicitude for the welfare of those who came within the circle of his acquaintance—in a word, his sterling attributes of heart and hand are known of all men. For years he had lived in comparative retirement, but none the less, as he went unobtrusively in and out among his fellow citizens, he carried with him the respectful esteem of all, because it was felt that his was a life that had been unselfishly devoted to the alleviation of the afflicted—of a class that naturally inspired more than ordinary sympathy. Part of a country's wealth, it has been well said, consists in her better minds: her statesmen, her philosophers, her Christians, her poets. Dr. DeWolf's mission was undoubtedly the care of the insane, and the memory of his faithful labors will not perish.

The deceased leaves one daughter, Mrs. C. Harrington, and a sister, the wife of Rev. Benjamin Hills, Yarmouth Co. He also leaves a grandchild, in England, daughter of his deceased son, Dr. George DeWolf."

Correspondence

To the Editor of the American Journal of Insanity:—Some twenty-three years ago at the instance of the New York Neurological Society an active discussion of insane hospital management was inaugurated. Under the impetus of this movement sundry attempts of rather dramatic character were made at what was called non-restraint. One of these attempts is doubtless that alluded to in the obituary of Dr. J. C. Shaw in the January Journal. As regards the success of this attempt your obituarist seems to be too sanguine. It was pointed out by Dr. Landon Carter Gray (lately deceased), then a Brooklyn neurologist, that the abolition of restraint had simply substituted seclusion and manual restraint for mechanical. Dr. Shaw's predecessor, Dr. R. L. Parsons, was not addicted to the use of excessive restraint, and in justice to him the fact should be remembered that many of the statements made as to the amount of restraint used by him were enormously exaggerated. As Dr. Shaw was not a resident of the hospital, the essential principle of non-restraint laid down by Conolly—that the superintendent must exercise a personal supervision—could not be carried out. Dr. Landon Gray's examination showed that it had not.

The obituary also contains an erroneous statement as to the first report of trophic disturbances in paretic dementia. At the January 3, 1878, meeting of the New York Neurological Society I read a paper on trophic disturbances in insanity in which I used the following language (Journal of Nervous and Mental Diseases, 1878, page 258): As regards the conclusions I have been able to draw from my post-mortem examinations of paretic dementia I have been able to select as probably trophic those changes which are analogous to those discovered in not a few instances of progressive locomotor ataxia. That this similarity in the dependence of analogous symptoms on similar lesions is

in perfect accordance with the general similarity between these two diseases regarding many other points, is obvious. The general "conclusion is, that the chronic and slowly progressing affections, such as progressive muscular atrophy, muscular lipomatosis, the marbling of the extremities, phlegmonous intractable ulcers, atonic decubitus and the various changes of the bones and joints, whether in the direction of osteomalacia, premature and excessive ossification, hydrops articuli or thickening of the articular extremities of the long bones, are all referable to the pathological conditions of the gray nerve cells and neuroglia of the anterior cornua of the cord." "Arthropathies of the nature of those already referred to as observed by Charcot, Ball and J. K. Mitchell in locomotor ataxia have been found in about fifteen cases of general paresis, nine of which were more properly locomotor ataxia and paresis."

At the same meeting Dr. Shaw exhibited specimens of peculiar markings of medullated nerve fiber. He examined the specimens I exhibited and made some remarks in the discussion. There is so little recognition of what American alienists have done that I have been prompted to correct the errors in the obituary in justice to Dr. L. C. Gray, Dr. R. L. Parsons and myself.

Very sincerely,

JAS. G. KIERNAN, M. D.

Book Reviews

Grundriss der Psychiatrie, in klinischen, Vorlesungen. Von Dr. C. Wernicke, Professor in Berlin. Leipzig: Verlag von Georg Thieme, 1900. (Outline of Psychiatry, Dr. C. Wernicke.)

Professor Wernicke's book is so different from the ordinary text-book on insanity that it is by no means easy to give an adequate idea of it in the compass of a review. It is given in the form of a course of clinical lectures, the first eight of which are devoted to the psycho-physiological introduction, the following nine to the paranoiac conditions, and the remainder to the acute psychoses and conditions of defect.

His conception of mental diseases as diseases of the brain is founded on Meynert's division of the nervous system into the sensory projection system, the motor projection system, and the association system. Pathologically, he considers that the distinction between the so-called organic brain diseases and the psychoses lies in the fact that the former are predominantly diseases of the projection systems, the latter of the association system.

It is of course evident that all our beliefs and mental conceptions consist in mental associations. The author divides them into three categories—the outer world, the body, and the personality, and makes large use of this division in his terminology, which is, to a great extent, original with him. Delusions in regard to the outside world are "allopsychoses;" in regard to the subject's body, "somatopsychoses;" in regard to the personality, "autopsychoses." These different mental disturbances may be combined in the same case, constituting what he calls the mixed psychoses.

The fundamental idea upon which the entire work is based is, that all psychoses are due to anatomical interruption of the paths of association in the brain, and that the other phenomena of mental disturbance—hallucinations, emotional disorders, disturbances of motility, etc., are consequences of this condition. To this interruption he applies the term "Sejunction," which, of course, means the same as "dissociation." He essays a quasi-mechanical explanation of the assumed dependence of hallucinations upon sejunction, supposing it to be due to an overflow of nervous force, in consequence of obstruction of its accustomed channels, into unusual paths.

In his account of the paranoiac conditions, the author expressly repudiates the doctrine of paranoia as a distinct disease. He holds that progressive delusional conditions resulting from acute processes

may be indistinguishable, except by their history, from those that are symptomatic of chronic disease. He goes still further, and maintains that persons who have recovered, so far as any active morbid process is concerned, may go on building up a structure of systematized delusions on the foundation of the memories of their uncorrected hallucinations and delusions during the acute attack, just as a sane person might misinterpret the conduct of others in regard to whom he had formed erroneous beliefs in a perfectly normal way. The disposition to systematization of delusions he believes to be due to the attempt to account for the existing beliefs or sensory disturbances—the logical tendency of the mind.

It is impossible to do more, in respect to the author's treatment of acute psychoses, within the limits of a review, than to endeavor to give some idea of his standpoint. In general, it may be said that he treats almost exclusively of symptoms, without attempting to assign them to their underlying morbid conditions. Thus, he introduces a case of delirium tremens under the title of "acute hallucinosis." In speaking of its etiology, he states that alcoholism is the most common cause, but that it may occur in cases in which alcohol can be excluded with certainty. Many would probably consider, in such a case, that, however similar the symptoms, they had really to do with a distinct disease. Perhaps a paragraph setting forth his views on the general subject of etiology may be quoted:

"Gentlemen! Summary as is the account which I have given you in the foregoing chapters, you will, nevertheless, perceive from it what advantage the etiological standpoint gives for the knowledge and understanding of the psychoses. You will, however, have found the proposition which I have so often and abundantly sought to impress upon you everywhere confirmed, that the etiological standpoint is only of advantage when we keep it strictly separate from the clinical definition of the different psychoses, and do not attempt artificially to construct definite clinical forms of an exclusive etiology."

He nowhere, so far as we understand him, gives any countenance to such attempts as Kraepelin's to determine the relationship of cases by a comparison of their clinical course and outcome.

Proceeding on the symptomatic principle, there is, of course, no lack of variety in forms of disease. The author enumerates some twenty acute psychoses, and says that these are only the fundamental forms, so to speak, and that, with all his experience, he still often finds cases which he is unable to classify.

There remains the anatomical principle of classification, of which the author is hopeful, although he does not find it sufficiently developed at present. He considers that degenerative conditions of the cerebral cells have been shown to exist in a great variety of psychoses, but that nothing specific has been discovered, and suggests that the localization of the degenerations may ultimately be found to account for the difference in symptoms.

It will be seen that the work does not lack in originality. Whatever may be thought of the correctness of the author's views, it is full of food for thought. It may be well, in conclusion, to consider briefly whether the fundamental assumption of the book is justified.

The author says (p. 218): "In disorientation we must see the true essence of every psychosis. . . . There is no insane person who is not in some manner disoriented. If he is not so, he is not, in the strict sense, insane." Is this the fact?

Let us take, for example, his account of "affective melancholia." To quote his own words: "The beginning of affective melancholia often manifests itself in the incapacity for any undertaking, however easy. Thus, the business man, called on every day for a new undertaking, gives up; the student refuses to take his examination, although previously confident of success," etc. . . . "The consciousness of impeded will-power, the subjective feeling of insufficiency, is probably the most significant and characteristic symptom of affective melancholia." Not a word of disorientation here. He goes on to say that the result of this feeling may be either a consciousness of dulling of all the emotions —a want of interest in life, which may lead to suicide, or, on the other hand, delusions of unworthiness and self-accusation.

It seems to us that both the clinical facts in disease and the analogy of normal psychology go to show that in a large proportion of cases emotional disturbances are the cause of delusions. We daily see the sound of mind forming false beliefs under the influence of hope, fear, love, hatred, jealousy. There is, in these cases, as true a "disorientation" as in the delusions of the insane; the difference is that in the one case the emotional disturbance is physiological, in the other pathological. Why should the course of events in disease be different? The young man in love invests the beloved object with all manner of charms visible to no eye but his own. If he is rejected, he very probably imagines that he can never love again, which, in the majority of cases, is contrary to the fact. In mania, there is the physical feeling of well-being and unbounded energy. What more natural than that it should lead the patient to extravagant beliefs as to his powers and prospects?

In cases in which there is a dissociation of the normal relations of ideas, are we justified in assuming that it always signifies an anatomical interruption of the conducting paths? In view of the suddenness with which restoration to normal mental conditions may occur, it does not seem that we are justified in assuming such to be the fact in any other sense than as it may occur in health. In dreaming, for instance, there is a disturbance of the normal waking associations, as complete, in many cases, as in the most absurd delusions of the insane. It seems reasonable to suppose that the mechanism in the two conditions is similar.

So far as we can see, the author brings no proof of his "sejunction hypothesis," except the alleged universality of the phenomenon. If it is not universal, and if, in some of the cases in which it exists, it is secondary to other mental disturbances, it would seem to be a mistake

to consider disorientation the essence of insanity, important as is unquestionably the part which it plays.

Nothing but praise can be given to the clinical setting forth of the cases on which the lectures are based, and the author is not trammeled by any classification into which he is obliged to force his cases, regardless of fitness. If he does not find a term characteristic of the case in hand, he provides one. No text-book with which we are acquainted represents so truly the actual multiplicity of symptoms met in practice, and the book abounds in acute observations. No one can fail to find it stimulating, however he may disagree with some of the author's conclusions.

A Pocket Medical Dictionary, giving the pronunciation and definition of the principal words used in medicine and the collateral sciences, including very complete tables of clinical eponymic terms of the arteries, muscles, nerves, bacteria, bacilli, micrococci, spirilla and thermometric scales, and a dose-list of drugs and their preparations in both the English and metric systems of weights and measures. By GEORGE M. GOULD, M. D. Fourth edition, revised and enlarged. 30,000 words. (Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street. 1900.)

This is a most useful and convenient little book. The selection of words is excellent, including recent terms, and the definitions are good. It is difficult to perceive how more information could have been crowded into the space. The print is clear and the paper thin, so that the volume of 838 pages is easily carried in the pocket.

The Criminal: his Personnel and Environment. A Scientific Study. By AUGUST DRÄHMS, Resident Chaplain, State Prison, San Quentin, California, U. S. A. With an Introduction by CESARE LOMBROSO, Professor of Psychiatry, University of Turin, Italy. The Macmillan Company, 1900.

Professor Lombroso, in his introduction to this book, says: "I have not had the good fortune for some time to find an author who so thoroughly understands my ideas, and is able to express them with so much clearness, as the author of this book." After such a statement from such a source, it is superfluous to add anything on this point. It must not be supposed, however, that the author is an uncritical follower of Lombroso; on the contrary, he dissents, very decidedly from the view that even the born criminal is marked off from all the rest of mankind by his outward configuration, although he freely admits that anomalies are more common in that class than in the population at large.

He classifies criminals under three heads:

I. The instinctive criminal.
II. The habitual criminal.
III. The single offender.

He recognizes perfectly well that all such classifications must be more or less arbitrary, and that no hard and fast lines can be drawn. Still, he finds, in common with all, probably, who have carefully studied the subject, that there are those who have a natural and ineradicable bias toward crime; others who are led into habits of crime by their circumstances, and still others in whom the criminal act is an exceptional or unique occurrence. In regard to all these classes he has much that is of interest to say. Speaking of the lack of foresight commonly shown by instinctive criminals, he rightly attributes it to lack of imaginative power. He recognizes that persons of this class are organically incapable of reformation, and that the only security of society against them lies in permanently putting it out of their power to indulge their vicious propensities.

In regard to the habitual criminals, as distinguished from the foregoing class, he finds that they may become by habit as ineradicably vicious as the others by nature, and that "It cannot be said, after a certain point in their experience has been attained, that they are any longer in the *true sense* free moral agents." It would be interesting to know whether, in his opinion, persons in whom virtuous habits have become equally fixed and invincible are any more free.

Chapters are devoted to recidivism, to the juvenile offender, in his opinion the most important division of the subject, and to the relations of hypnotism and crime, on which he has nothing sensational to say, being decidedly sceptical as to the probability of any but the willing succumbing to any such influence.

The concluding chapter, in which he gives his views as to the practical measures necessary in the face of the criminal problem deserves almost unqualified commendation. That vindictiveness should have no part in the treatment of criminals; that incorrigible criminals should be permanently confined; that the best hope of reformation of those capable of it lies in training in habits of honest industry; that hardened offenders should be separated from those in whom crime has not become habitual, and that all sentences to imprisonment should be absolutely indeterminate as to duration, are principles which cannot be too urgently or persistently enforced. The pernicious effects of drink; the folly and wickedness of the attitude of the trade unions toward the employment of convicts; the pernicious effects of the prison system at present in vogue in most parts of the country, all come in for well-merited castigation. There is no sentimentalism in the author's view of crime and criminals, and there is a rather surprising absence of emphasis on religious as distinguished from moral influences, considering the author's profession.

It is a pity that a book containing so much valuable information and so many sensible ideas should be written in so careless and slipshod a style. It is very often ungrammatical, and sometimes almost unintelligible.

Festschrift in Honor of Abraham Jacobi, M. D., LL. D.: to Commemorate the Seventieth Anniversary of his Birth, May 6, 1900. The Knickerbocker Press, New York, 1900.

This handsome volume of 496 pages contains the contributions of many of the most distinguished men of the medical profession of this country, England, and the continent of Europe, in honor of the eminent Professor of Pediatrics. The articles are not at all restricted as to their subjects, but cover a very wide range in medicine, surgery and pathology. It is, of course, impossible to give an idea of the contents of such a book in an abstract. We can only say that no professional reader can fail to find much of interest and profit in it.

Contributions from the William Pepper Laboratory of Clinical Medicine. Published on the Phoebe A. Hearst Foundation. Philadelphia, 1900.

This report appeals rather to the pathologist than the clinician. The subjects treated are Muscular Dystrophy, Amyotrophic Lateral Sclerosis, Effects of Rattlesnake Poison, A Fatal Case of Sulphonal Poisoning, Melanotic Sarcoma of the Spinal Cord, Studies in Leukæmia, Pathology of the Erythrocyte, Restitution of the Blood-plasma following Intravenous Saline Injections, Influence of Immoderate Water-drinking upon Metabolism and Absorption, An Experimental Study of the Etiology of Appendicitis, Primary Endothelioma of the Left Superior Pulmonary Vein, A Clinical Method for the Estimation of Breast-milk Proteids, and The Etiology of Pertussis. Any one who wishes to be acquainted with the latest researches in regard to any of these subjects will find great advantage in consulting this volume, which bears witness to an immense amount of thorough work. It is issued in sumptuous style, with large print, wide margins, and numerous and excellent illustrations.

Bibliographischer Semesterbericht der Erscheinungen auf dem Gebiete der Neurologie und Psychiatrie. Von Dr. med. et phil. G. BUSCHAN. Fünfter Jahrgang, 1899. Zweite Hälfte. Jena, Verlag von Gustav Fischer. 1900. (Bibliographical Index of Neurology and Psychiatry, by Dr. Buschan.)

"Of making many books there is no end, and much study is a weariness to the flesh." This catalogue of the titles of neurological publications during six months forms a volume of 480 large, closely printed pages. Whether the editor has overlooked enough to materially add to its size or not, we will not undertake to determine by original investigation. He seems to have done his work with great thoroughness, and the errors of spelling which so often disfigure the attempts of Germans to quote English are, so far as we have noticed, conspicuous by their absence. The work must be invaluable to all who have occasion to consult the literature of the subjects of which it treats.

Les Causes Sociales de la Folie. Par G.-L. DUPRAT, Docteur des lettres, Professeur de philosophie au lycée d'Alencon. (The Social Causes of Insanity, by G. L. Duprat.) Paris, Felix Alcan.

Sanity of Mind: A Study of its Conditions, and of the Means to its Development and Preservation. By DAVID F. LINCOLN, M. D. G. P. Putnam's Sons, 1900.

These two little books have essentially the same object—to enquire into the causes of insanity and the means of its prevention—and are both written for the general public rather than specifically for professional readers.

Professor Duprat is not a physician, and takes some positions which are hardly in accord with the most advanced medical thought. Thus, he takes the ground (p. 51) that traumatisms, intoxications, infectious fevers, etc., produce insanity principally by the psycho-physiological distress which results from them. He considers it probable that all insanity, including specifically alcoholism, and apparently also general paralysis, is essentially the same, and is to be divided into the two forms of mania and melancholia (p. 54).

In general, the author is disposed to exalt the influence of the environment rather than that of the individual constitution, in the production of insanity, and to attribute hereditary degeneration to the prevailing social standards in regard to marriage, drinking habits and the like. Drunkenness he attributes mainly to insufficient nutrition, and has little confidence in any measures for its prevention which do not involve a different standard of living in other respects among the laboring population.

His conclusions as to the means of prevention of insanity seem rather vague. The social conditions are to be improved by a better education, but in what it shall consist he does not seem clear. He repudiates all religious systems, and admits that no philosophical system of morals has won universal acceptance. He concludes that a moral creed must be a work of time and patience, and involve the cooperation of all social classes.

Dr. Lincoln has much more definite ideas about what needs to be done, and the greater part of his book is devoted to the practical aspects of the subject. He also believes that education is the main dependence for the prevention of insanity, both in the individual and the race, but he lays a good deal of stress on the recuperative power of nature—the tendency of unfavorable variations to die out. For those predisposed to insanity, he urges the building up of the physical health, avoidance of intellectual overstrain and excitement, and the cultivation of self-control; for future generations, healthy habits of life and the prevention of unsuitable marriages. He discusses the question of the sterilization of imbeciles, and, although he is inclined to think that the same end can usually be

attained by less radical means, he evidently considers the question a debatable one.

Although he seems to us too much inclined to make the will a metaphysical entity, sitting at one side and determining the choices of the individual, instead of being nothing more than those choices themselves, his practical suggestions are good, and the tone of the books is eminently wholesome.

Half-Yearly Summary

The striking feature of the current reports of institutions for the insane, is the attention given to the prevalence of tuberculosis, and the efforts toward its prophylaxis. In the following Summary, Tewksbury, St. Elizabeth's, Danvers, the Hudson River and Manhattan State Hospitals refer especially to the need of isolation, and in numerous reports not quoted the same interest is shown. Dr. Rogers, in the Logansport report, states that "tuberculosis leads the van in the mortality list."

ALABAMA.—The General Assembly of Alabama, in the session of 1900-'01, enacted a new law for the incorporation and management of the insane hospitals of the State. By this law the institution heretofore known as "The Alabama Bryce Insane Hospital," becomes "The Bryce Hospital;" and the property known as the Mount Vernon Barracks Military Reservation, situated in the county of Mobile, granted to the State of Alabama by an Act of Congress of the United States, approved March 1, 1895, and conveyed to the State of Alabama by a deed executed by Daniel S. Lamont, Secretary of War, dated March 13, 1895, "to be held and used for public purposes" is set apart for the use of the insane of the State, under the name of "The Mount Vernon Hospital." The Board of seven Trustees of the Bryce Hospital takes possession, control, and management of "The Bryce Hospital," at Tuscaloosa, and of "The Mount Vernon Hospital," at Mount Vernon, and of such other property as shall from time to time be placed under their care by the General Assembly of Alabama or otherwise; and this Board of Trustees and their successors in office are constituted a body corporate under the name of "The Alabama Insane Hospitals." The length of the terms of office of the members of the Board of Trustees is changed from six to seven years, and the present arrangement, by which the terms of certain members expire differently after periods of two years, is changed so that the term of one Trustee shall expire every year on the 30th day of September.

Political preferences are prevented by the following arrangement: Hereafter, as the terms of the different Trustees expire, the Board of Trustees is to elect persons to fill the vacancies whose terms shall be seven years each, to date from the expiration of the preceding term; and when the office of any Trustee is vacated by death, resignation,

removal from the State, or otherwise, the Board is to elect a person to fill the vacancy for the unexpired remainder of the term. In filling the vacancies as they occur, the Board is to arrange their elections so that at least four of the Board shall be practitioners of medicine; and so that three of the Board shall reside near the hospital at Tuscaloosa, and two convenient to the hospital at Mount Vernon, who constitute respectively Resident Committees, to manage, between the meetings of the Board, the affairs of the respective hospitals. The other two members of the Board shall be elected from other parts of the State.

The election of trustees is to be subject to confirmation by the Senate of the State.

For the immediate government and control of the said hospitals, the Board of Trustees elects a superintendent and determines his salary, who, in all his duties, is to be the executive officer of the Board, and to be held strictly accountable to them. The superintendent is required to be a physician of good business habits, of a humane disposition, a graduate in medicine, and a man of good moral character. He is to be elected for a term of not less than eight years, and when his term has expired, to continue in office until his successor is appointed and qualified. The superintendent may be removed from office by the Board of Trustees for just cause fully declared and set forth in their proceedings.

The superintendent is to appoint all the assistant physicians, stewards, managers, supervisors, nurses, and other employees who serve under him in the hospitals; he also has the power to remove any one of them from the employ of the hospitals at his discretion; and with the concurrence of the respective Resident Committees, he is to determine all the salaries, wages, and other compensations to be paid officers and employees; but the salaries, wages, and compensations are to be subject to the approval or disapproval of the Board of Trustees at any regular meeting, and in cases of disapproval, the Board of Trustees is to determine the salary, wages, or compensation.

The requirements for commitment of patients are stated as follows: A person shall be considered insane, or fit to be sent as a patient to an insane hospital, who, because of mental derangement, deficiency or defectiveness, is indecent in conduct or constantly troublesome to others; or who is a menace to the peace, welfare, or safety of others; or who is dangerous to his (or her) own life or safety; or who is destructive of property. The mental derangement shall be of longer duration than that of a fit of intoxication or the delirium of acute sickness. Persons who are simply and permanently weak-minded, imbecile, idiotic, or otherwise demented, and are harmless, shall not be received as patients into the hospitals for the insane. No person shall be received in either insane hospital as a patient without the proper certificate from the Judge of Probate of the county in which he resides. When a relative, friend, or other person interested, desires to place a person as a patient

in the insane hospital, he shall apply to the Judge of Probate of the county in which the person resides, and the Judge of Probate, without delay, shall investigate the case, by examining witnesses or not, as he sees fit, and if he is reasonably convinced that the case is a suitable one, he shall make application to the superintendent at Tuscaloosa for his admission.

On receipt of the application of the Judge of Probate the superintendent shall promptly forward a reply, stating whether the patient can be received, and to which hospital he shall be sent. When informed by the superintendent that the person can be received as a patient, the Judge of Probate shall call witnesses, at least one of them shall be a physician, and fully investigate the facts of the case, either with or without a jury, and either with or without the presence in court of the person whose sanity is in question, according to his discretion; and if the judge or the jury, as the case may be, believes that the person is sufficiently defective, mentally, to be sent as a patient to the hospital for insane persons, the Judge of Probate shall make two copies of a certificate of commitment, one copy of which shall be filed in his office and the other he shall send with the patient to the hospital.

For the support, repair, and improvement of the hospitals, a sum, regulated by the Board of Trustees, not exceeding three dollars a week, or thirty-nine dollars for thirteen weeks, is to be paid by the State quarterly, for every indigent and criminal patient.

ARKANSAS.—*State Lunatic Asylum, Little Rock.*—In the last biennial report of this institution, dated December 1, 1900, the superintendent, Dr. P. O. Hooper, makes an urgent appeal for further accommodation for the insane.

In October last Dr. Hooper addressed letters of inquiry to the county judges of all the counties as to the number of insane in their respective jurisdictions, who were under detention and incarceration, because of mental infirmities, and who could not obtain admission to the State asylum for want of room. This inquiry revealed the fact that 365 patients, half as many as are in the asylum, are incarcerated in county jails or held under restraints without the needed care their condition demands.

Dr. Hooper believes that the best interests of these patients and of the State would be met by the erection of an additional hospital for chronic cases, which would also relieve the congestion at the Little Rock Hospital, and enable the latter institution to better fulfil its aim in the restoration of recoverable cases.

The infirmary building was completed and occupied in July last. This building will accommodate 40 patients, 20 of each sex. It has permitted the removal of the physically sick patients away from crowded and noisy wards to a quiet and cheerful home, where they receive careful attention and remedial treatment.

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CONNECTICUT.—*Connecticut Hospital for the Insane, Middletown.*—In addition to a regular daily clinic before the staff, a monthly evening meeting of the "Central Medical Society," which includes all the members of the staff and physicians in general practice within easy reach of the hospital, is held. There are also occasional staff meetings in the evening when laboratory and pathological work is discussed. The staff is also enjoying an evening course of lectures on psychology by Professor Raymond Dodge, who is very much interested in both normal and morbid psychology as viewed by Kraepelin, and is also giving lectures on morbid psychology to his class at Wesleyan University, illustrated by cases at this hospital.

Dr. A. R. Defendorf is giving a course of lectures to the class at Yale Medical School with clinics for the medical students at the hospital weekly. He bases his instruction upon the Kraepelin system of classification.

There are at present 2125 patients in this institution.

DISTRICT OF COLUMBIA.—*Government Hospital for the Insane, Washington.*—An extensive enlargement of the hospital sufficient to accommodate 1000 patients is about to be undertaken on an appropriation of $975,000 for the purpose. The law requires the building to be fireproof, and to provide accommodations for all the special classes of acute insanity. The plans, provided by Messrs. Shepley, Rutan & Coolidge, of Boston, are in process of development. It is proposed to locate the buildings on a tract of land immediately adjoining the present site on the south. There will be two hospital buildings—one for each sex—accommodating 104 patients each; two tuberculous hospitals accommodating 48 each, which buildings can also be used in part for infectious diseases; two buildings for disturbed, each accommodating 120; one building for untidy and destructive men, accommodating 96, and about eight cottages, varying in capacity from 40 to 50 each.

ILLINOIS.—The charitable institutions of the State of Illinois are asking for ordinary appropriations amounting to $3,705,500, and special appropriations aggregating $2,029,199.92. The State Board of Public Charities recommend for ordinary expenses an aggregate of $3,476,060, and for special purposes $1,468,474.92, making a reduction from the amount asked by the institutions of $790,165.

The State Board of Charities has recommended in their report their own abolition and the substitution of a State Board of Control.

A bill has been introduced into the legislature for the establishment of a colony for epileptics. Public sentiment seems to favor this bill.

The new hospital for the insane at Peoria is nearing completion, and will be ready for occupancy within a few months. The position of superintendent of this institution has not been filled yet, the first appointee, Dr. Zellar, still being with the army in the Philippine Islands.

Iowa.—There are at the present time 967 patients at Mt. Pleasant, 1023 at Independence and 982 at Clarinda. In the institution for feeble-minded children at Glenwood there are 896 inmates. The contract has just been let for the finishing of the new hospital for the insane at Cherokee, which is located in the northwest part of the State. This contract embraces the drilling of an artesian well twelve inches in diameter, the erection of a building for boilers and engines and dynamos; also of a smokestack and a laundry building, and all ducts for pipes and wires connecting these outside structures with the hospital proper. It also includes the plastering of the entire institution, the laying of floors and doing all other woodwork. It embraces all necessary machinery for all departments, together with the steam-heating, the lighting and the plumbing. Plans have also been made and a contract let for the grading and artistic finishing of the grounds in front of and about the hospital buildings, embracing more than 100 acres. One year is allowed for the accomplishment of this work, and it is expected by the Board of Control that this new hospital, with a capacity for five or six hundred patients, will be ready for occupancy by the first of July, 1902.

At the conference held in the State capitol building on March 19th and 20th, a paper written by Warden Wolfers, of the State penitentiary of Minnesota, favoring the indeterminate sentence for criminals, was read; also a paper by Mr. Jackson, the gardener of the institution for feeble-minded children, concerning the planting and cultivation of fruit trees, vines and plants, which are valuable for the use of the State institutions in Iowa. Judge Kinne, chairman of the Board of Control, also read a paper on "Lessons from Industrial School Statistics," which was evidently the result of great labor and very valuable. His conclusions from investigation will undoubtedly result in the prevention, to some extent, of disobedient and lawless children. The deductions made from the facts stated in his paper are, first, that the character of the parents is a potent factor in the shaping of the future of their children; second, that the breaking up of the family circle by the death of one or both parents often results in the going astray of one or more of the children; third, that the unhappy conjugal relations of parents, resulting in divorces and separations, is the greatest single cause for the large population in the reformatory schools; fourth, intemperance in one or both parents is a decided disadvantage to the children; fifth, permitting children in their early years to be habitually absent from home during the evening is a dangerous practice. A valuable paper was also read at this conference by Superintendent R. C. Barrett, of the Department of Public Instruction, entitled: "Relations of the Public Schools to the Schools in State Institutions." Superintendent F. P. Fitzgerald, of the Industrial School for Girls, also read a very excellent paper concerning the advantages of having plenty of good music in our State institutions. He emphasized the importance of giving all boys and girls in the reformatory schools a thorough and first-class

musical education, so far as they are fit and able to acquire it. He also showed conclusively the advantages of music in improving the dispositions and the deportments of the inmates in the institutions for incorrigible children. It is probably true that more money is expended in the State of Iowa in supplying both vocal and instrumental music in all of the State institutions than in any other State of the Union of equal population and wealth. Each of the three hospitals for the insane keeps itself constantly supplied with a good brass band and with a good orchestra, in addition to vocal music which is supplied in the wards during the afternoons and evenings of the winter season; also for religious services in the chapel on Sundays and for the various evening entertainments. Each of the other State institutions gives much attention to music and some of them are supplied with good strong bands.

The Fourth Annual Session of the Iowa State Conference of Charities and Corrections will be held at Red Oak, Iowa, on the 3d, 4th and 5th of next month, April. Judge G. S. Robinson, a member of the Board of Control, is vice-president, and Dr. Powell, of the Institution for the Feeble-minded at Glenwood, is a member of the committee on arrangements. Ex-Governor Larrabee, who was the first chairman of the Board of Control of State institutions in Iowa, will read a paper at this meeting on the "Prevention of Crime."

The "Rules and Regulations for the Government of County and Private Institutions in which Insane Persons are kept," which have been adopted by the Board of Control of State institutions for the State of Iowa have been issued in a small pamphlet for the use of the institutions under the direction of the Board of Control, which are to be visited twice each year by the members of the Board of Control or by their agents.

MASSACHUSETTS.—*Worcester Insane Hospital, Worcester.*—Dr. Meyer presents a special report of medical work, from which the following excerpt, showing the modifications in methods, is made:

The general arrangement of the work has been changed in several respects. The daily staff meetings have been abandoned, and the time gained has been mainly devoted to a more extended observation and examination of the patients on the four services. The four floors of the hospital have been divided into two services on both the men's and women's side. The ground floor remains the chief admission service; the second floor becomes a second admission service, mainly for the chronic cases. The physician in charge of the second admission service is further responsible for the third and fourth floors with the asylum cases; the junior assistant of the second admission service taking practically the work of the fourth floor, so as to relieve the senior. The four junior assistants gave all their time to clinical work, including the clinical laboratory work, which has been extended somewhat as compared with previous years. They also took their share in the autopsy

work, whereas the working up of the specimens resulting from the autopsies passed into the hands of a special laboratory assistant, appointed January 1, 1900. This made the laboratory work much more uniform and reliable—far more than in the previous years, when one set of inexperienced assistants took their turn of six months of laboratory work and then made place for another set of inexperienced men. The appointment of a special laboratory assistant and of a druggist have done much to make the work smoother, and to bring us nearer the practical balance of means and aims asked for in the last report.

In the course of this year it has become possible to make a preliminary grouping of the material collected since October, 1896, and to take the first steps towards analyzing some of it. The result of this beginning has led to some changes in the current work, especially in the form and method of keeping the records, which has rendered them at once more useful clinically and more satisfactory for the current administrative needs. Our chief efforts in the coming year will be in the direction of a better knowledge of disease forms and prognosis, and more definite indications for treatment.

During the past year our working plan has received several comments which deserve to be alluded to for the sake of encouragement, and in order to bring out some warnings against misunderstandings. The efforts of far-sighted alienists, like Dr. Cowles, Dr. Hurd and others, and the less widely known but equally meritorious efforts of some of our superintendents of hospitals for the insane, have brought forth several noteworthy types of progress—training schools for nurses, pathological laboratories and pathologists, and efforts along the line of clinical research. In this movement we have tried to take part. The fundamental principle which underlies our own efforts towards the improvement of psychiatry and distinguishes them from the methods adopted in practically all the other places is this—that we are not satisfied with a scientific department simply, grafted somewhere in the traditional asylum, but seek the growth of the whole hospital idea in conformity with the principles of modern medicine. We would stamp all the work that pertains to the patients with that conscientiousness and faithfulness and accuracy which alone give a satisfaction greater than the salaries which we receive, and make it of value for useful deductions in the line of medical experience. *Every* member of the medical staff is given to understand that there is only one best way of doing the medical duties, and that the doing one's best in that direction is regarded as the only sufficient evidence of good will and good ability. We are not satisfied with a single "department" encouraged to do its work as it ought to be done, while the others lag behind, a continual drawback to those who would do better. If the hospital does its work well, both the patients and the annals of medical experience get their legitimate dues as fruits of its labor; therefore, I hear only with regret comments on the "pathologist's department," where the general efficiency of the hospital

work should be considered, of which that department is only a valuable branch, if the work of the hospital generally furnishes the soil and atmosphere and needs. This is the key-note of our plan, and in the realization of it lies our chance of success.

The new distribution of the work among the physicians has brought within the reach of possibility a decidedly greater efficiency in the year's work; and when greater economy of labor shall be obtained by a more rapid and general acquisition of efficient methods and less longing for the extraordinary, we can hope to master the great task of dealing with over five hundred admissions, a daily population of more than one thousand patients, and over sixty autopsies, with a fair degree of satisfaction.

The following contributions have come from the hospital this year: The articles on mania, melancholia. monomania, moral insanity, paranoia, periodicity, psychoses, for Prof. M. Baldwin's Dictionary of Psychology (in press). Other studies ready for the press are: The report on eight cases who died with a peculiar symptom-complex and findings in the autopsy which led to the establishment of a very interesting pathological complex provisionally called "central neuritis;" further descriptions of a tumor of the hypophysis in acromegaly, with new formation of ganglion cells; and of an instance of a metastatic tumor of the thyroid and several other observations in the field of tumors. A number of other studies have been considerably advanced. The collection of serial sections of normal and pathological brains and of the results of autopsy studies has been increased considerably.

—*Taunton Insane Hospital.*—The use of one ward in each of the infirmaries as a hospital ward for the treatment of acute cases has been very satisfactory. The experience of others has been here demonstrated, that a large class of excited and disturbed cases can be cared for better on an open ward, where they are always under the observation of the nurse, than in single rooms. At the present time we have two wards for each sex devoted to the treatment of acute cases, such as would be cared for in a hospital especially built for that class.

During the past year the work of the pathological department has been conducted on the same general lines as before. We were able to obtain but 17 autopsies, which is less than one-third of the number held the year previous. Of these 17, a large proportion were cases of much interest. Opportunity was given during the year for each member of the staff to spend a number of weeks in the laboratory in order to come more closely in touch with the work of that department. Recently a complete outfit for bacteriological work was added to the laboratory equipment. Since then cultures have been made whenever occasion has arisen. In the clinical work greater thoroughness has been striven for in the study of cases. By this is meant closely observed and accurately recorded mental symptoms, physical examinations which include careful study of the eye, ear and nervous system, microscopical and chemical

examinations of blood, excreta and secreta. The impossibility of following such a scheme in every case will readily be seen by any one acquainted with the number of patients yearly admitted to each of the large State hospitals and the comparatively small working force of assistants. This has been met by giving to all such study as is necessary for their intelligent treatment and the selecting of certain cases for special study. The list of selected cases includes those which are recent, those where a satisfactory previous history can be obtained, and those likely to remain for some time under observation either in the hospital or within accessible distance. In order to follow cases after they are discharged from the hospital, correspondence is sought either with the individuals or with some person in a position to give reliable information. The result of the correspondence is incorporated with the case record. The daily clinics before the staff have been continued during the year.

Some improvements have been made during the year which may be worthy of record. A small, convenient room has been fitted up for minor surgery, where all the surgical instruments and other needed appliances are kept in readiness for use, aseptic dressings being an important part of them. This room is kept in order by one of the graduate nurses in rotation, so that all will get valuable experience from it.

—*Danvers Insane Hospital.*—The Board of Consulting Physicians makes the following reference to salaries of officers:

Our Consulting Board has seen, since its formation in 1882, the successive assumption of office of five superintendents, if in this category we include Dr. Stedman, who took Dr. Goldsmith's place during the latter's absence of a year, and who, if he had remained longer at the institution, would have been himself in the line of promotion. Each of these gentlemen resigned his connection with our asylum on account of the inducements offered him to better his material position elsewhere —inducements that probably no one of them would have felt justified in refusing. The Butler Asylum offers its head a house to himself, as well as a considerably increased salary. To this institution we were obliged to relinquish Dr. Goldsmith after four years of successful administration, and Dr. Gorton after two. Dr. Stedman placed himself at the head of an important private institution. Dr. Page, to whom we owe so much, and whose experience, after ten years' service, was of almost priceless value to our hospital, was captured in the same manner. Our present superintendent was approached, after he had been with us but eight months, with offers of a house to himself and an increase of salary if he would go elsewhere. The State of Massachusetts is amply able, and should be willing, to give the chief officer of the asylum a separate residence and a salary of at least four thousand dollars. And until it does this it will be liable to lose, one after another, from its service men whose abilities are unquestionable and whose experience is invaluable, thus depriving the institution that parts with them of the

advantage of a settled policy, and greatly embarrassing the carrying out of plans that take much time for their full development.

Dr. Harrington forcibly directs attention to the needs of isolation of tuberculous patients, in his last annual report, in the following words:

"The presence upon our wards of cases of tuberculosis, with active lesions and profuse sputum, is a serious menace to the non-tubercular, and cannot be viewed without apprehension; yet under the present conditions there is no other means of caring for our tubercular cases except in the wards, in close contact with the non-tubercular. I believe this is a problem which demands a solution, as far as is our power, and I call your attention to it as a matter for serious consideration."

An unusually large number of patients have been given the liberty of the grounds the past year, unattended by nurses. In few instances has this privilege been taken advantage of to effect an escape from the hospital. The result of treating such insane, as are deemed suitable, with liberality in this regard has been most beneficial.

—*State Hospital at Tewksbury.*—In their annual report, the trustees refer as follows to the change of name:

"By act of the Legislature (Acts and Resolves, 1900, Chapter 333) the name has been changed from the State Almshouse at Tewksbury to the State Hospital, thereby designating more nearly its true character, although no one name can accurately describe all the departments included in the establishment. The word hospital expresses happily the relation of the State to the three main classes for whom provision is expressly made, viz., the insane, the sick and the destitute. From the time of Fabiola, the Roman matron to whom the historian Leckey ascribes the distinction of founding, in the fourth century, the first charitable hospital, the term has implied alms, shelter, maintenance, medical and surgical aid, sympathy, education, and moral and religious influences. The great ideas of relief from immediate suffering, of asylum and protection for the helpless, of cure and comfort for the diseased and disabled, of reform and a new opportunity for the submerged and disheartened—in short, all that is suggested by the term hospital, is included in the work at the State Hospital, except the one idea of pension as a recognition or reward for past service."

The Hospital for Tuberculosis has been finished and was ready to receive patients September 30. It is located on a sandy knoll among a grove of pines about a quarter of a mile from and to the east of our group of buildings. A sandy soil, protection from the winds, a broad open area toward the south and a liberal amount of shade in summer are among the special advantages gained by this location. The building is constructed with accommodations for 100 men, classified in four different wards.

Facilities for open-air treatment are extensive; the wards are so arranged and lighted that an abundance of sunlight may be obtained at all times of the day. Large sun rooms are connected with each ward.

The down-draft system of ventilation is used and indirect steam heat for heating. The separation of the incipient and advanced cases of tuberculosis and all of the important sanitary conditions and matters of hospital comfort and convenience have been specially considered in the construction of this building.

The hospital is two stories in height, built of brick, is of substantial construction, comfortable in suggestion and of attractive appearance.

MICHIGAN.—*Eastern Michigan Asylum, Pontiac.*—During the year, 195 staff meetings have been held, 192 cases have been presented for study and diagnosis, 141 journals, books and pamphlets have been abstracted, 9 original articles read, and 16 meetings have been devoted to the report of work by the members of the staff.

Considerable reliance is still placed on the use of tuberculin as a diagnostic agent for suspected cases of tuberculosis. The test has been found reliable and free from danger. During the year, 17 patients suspected of having tuberculosis in some form were subjected to the test. Of these, only two reacted, and further investigation proved them to be tuberculous. Of the 15 cases not reacting none have shown any symptoms of tuberculosis.

An epidemic of disease among the swine necessitated the killing of the entire number of hogs. Of 114 animals killed, only 11 were found to be free from active disease. The microscopic lesions showed some variation. A pneumonic process was demonstrated in nearly all cases. In addition, a number of hogs were found to have numerous abscesses, both visceral and parietal, involving the thoracic and abdominal cavities. Millet-sized bodies scattered through the lungs, liver and lymphatic glands could be demonstrated in quite a few cases. The lesions were atypical and indicated a general infection. Dr. Will MacLake, of the asylum staff, is investigating the malady. Animal inoculations and cultures have thus far enabled him to isolate several pathogenic organisms having a causative relation to the disease.

—*Michigan Asylum for the Insane, Kalamazoo.*—Dr. Edwards describes in his last biennial report the experience of the Pathological Department, organized three years ago:

"On the 1st of January, 1898, this laboratory was opened at Ann Arbor, with Dr. Theophil Klingmann as pathologist. The work of the first year was satisfactory neither to the pathologist nor to the asylums, but from a modest beginning there has been steady growth, until at present this department seems to be on a well-established basis. The Board of Trustees of each asylum designates, upon the nomination of the superintendent, one of the members of the staff to give a part of his time to the Pathological Department, and to be known as the associate in pathology. The associate makes an extra effort, by correspondence or otherwise, to obtain full histories of cases selected for especial study. He makes careful clinical examinations in a systematic

way, with a special object in view, carefully records them and makes special efforts to obtain permission for autopsies. Much of the work during the first year and a half had lacked that definiteness of purpose and organization necessary for success. On October 1, 1899, a plan was put into operation for a more close union of the pathologist and the associates, and monthly meetings of the pathological staff were inaugurated. The work of the associates is directed by the pathologist from the central laboratory at Ann Arbor, where the first meeting, covering a period of two days, was held. The meetings since have been held alternately at the several asylums, and by this plan each institution will have at least two meetings each year. These meetings cover a period of two days and are participated in not only by the pathological staff, but by the staff of physicians at each institution where the meeting is held. By this method each associate pathologist has an opportunity to see the different cases, become familiar with the work in each asylum, as well as that which is done at the central laboratory. Each associate takes a part or all of the work accomplished by him to the meetings for demonstration and discussion, and from time to time presents written reports. The pathologist demonstrates all the specimens prepared at the central laboratory, gives directions in regard to autopsies, keeps records of the literature bearing directly upon the methods, and presents articles of interest at each meeting.

"Much of the study during the first year and a half was of morbid histology. Old paths which had previously been trodden were gone over again and some careful work was done. It was, however, thoroughly realized that it was as impossible in this way to arrive at the prime causes of morbid mental action as it would be impossible to fathom the secrets of electricity by examining, weighing and testing the broken and discarded dynamo lying useless on the rubbish heap. It is the intention that the work shall be more and more in the line of psychopathology and experimental psychiatry, and during the present year it has taken on more of this aspect. Several papers contributed by members of the pathological staff have been published in some of the leading scientific journals of the country.

"The method of conducting this department of work in Michigan seems to have several things to commend it. The expense is not such as to alarm legislators or would-be economists. The asylums pay the salary of the pathologist, each institution pays the traveling expenses of the associate to the regular meetings, and provides its laboratory with such appliances as are ordinarily required in a well-kept asylum. The University of Michigan supplies the central laboratory room, all expensive appliances, reagents, etc., and the pathologist has general supervision and direction of the work.

"The several asylums of the State are brought into direct and immediate contact with the pathologist at the central laboratory. Each institution has the stimulus of seeing what is accomplished in other institutions, and a desirable spirit of emulation has arisen. The pathological

department has at its command for purposes of study and observation more than 4000 patients, the course of disease in any one of which may be followed more or less intimately by each member of the staff.

"The work done at this asylum may be appropriately considered first under the head of laboratory methods and diagnosis, and second, pathological work proper. The mental condition of most patients is so marked upon admission to the asylum that the diagnosis can readily be made from the gross appearances and clinical symptoms. In some cases, however, an examination of the tissues and secretions throws a very interesting sidelight upon the conditions with which we have to deal and aids materially in arriving at a more accurate conception of the patient's condition in some obscure cases. As a routine procedure, the urine is examined soon after admission. Within a short time, generally within the first week of residence in the asylum, the blood is examined. In all cases in which there is reason to believe, either from the clinical appearance or history of the patient, that there may be either latent or active lung trouble, the sputum is repeatedly examined. The stomach secretions, after test meals, are examined in those cases in which there is defective or faulty digestion."

MINNESOTA.—On March 22d the State Senate passed the House bill creating a Board of Control to have supervision of all State institutions, after amending it so as to include the educational institutions in its provisions, the bill originally having exempted the State university and the normal schools.

This law is almost identical with that in the State of Iowa. The educational institutions referred to are not exclusively in the care of the Board of Control, but continue to be administered by trustees or regents as heretofore, with the understanding that the Board of Control is simply to examine into the pecuniary condition of these institutions and report upon it to the legislature with suggestions.

NEW HAMPSHIRE.—*Asylum for the Insane, Concord.*—Much interesting clinical and pathological work has been accomplished. Hydrotherapeutic measures have been used in many cases. The thyroid treatment has been faithfully tried with but indifferent results. The two latest hypnotics, dormiol and chloretone, have been and are still being tried on suitable cases. It is believed that dormiol is a safe and valuable hypnotic, easy of administration, and efficacious without producing bad after-effects. The plan has been adopted of having the assistant physicians embody in the annual report an abstract of the more important clinical and pathological work of their respective wards.

The envelope system of taking histories and keeping records has been found very satisfactory. The old cumbersome case-books have been discarded. All histories of new admissions are taken on separate sheets, all records of physical and mental examinations, of sleep, body weight, and temperature, urinary and blood analysis, stenographic records of

conversations, as well as anything of value psychically that the patient himself may write, are kept in the envelope assigned to the patient. Each patient has an individual envelope with an especial number, and his case history, instead of being carried through several volumes, is now all contained in this envelope.

NEW YORK.—*The Society of the New York Hospital, Bloomingdale, White Plains.*—A frame cottage is in process of construction, which will be probably one of the series of such buildings, in appearance like the seaside cottage, to be used by a single patient and her attendants, or by two or three congenial patients desiring considerable separation from the other inmates. This will be ready for occupation by the first of July, and very likely another will be started at once. It will be connected with the general buildings by "sub-surface rapid transit," and will consequently require no independent cooking, heating and lighting installment. There is also under construction a new pavilion in harmony with the general system; a building of two stories, the first of which will be intended to give rather ample accommodations to patients of a disturbed but well-paying class, a feature of which will be much light for sun-parlor effect. The second story of the building will be a large open room with sky-light, and south and east sides largely glass. This room will afford excellent accommodations for such winter sports or occupations as may arouse the interest of the ladies, and will be ample for bicycling, roller-skating, dancing, art work, gymnastics and anything requiring considerable area and plenty of light, sunshine, and protection from the cold winds in winter. This whole building will be available for the next winter season. The design of the institution and its various apparatus have, after five years, proved to be eminently satisfactory.

—*Hudson River State Hospital, Poughkeepsie.*—Dr. Pilgrim sends the following communication to the SUMMARY:

THE DECORATION OF DISTURBED WARDS.

It has always been our belief that there are no results more satisfactory in hospital management than those which are sure to follow the repairing and decoration of wards occupied by the disturbed and destructive insane, and a remarkable confirmation of this belief has been witnessed in this hospital during the past few months. Two of the wards used for the most disturbed women had, from lack of funds, remained in bad repair for several years. The walls were cracked and unpainted, the floors old and shrunken, the furniture heavy and unattractive and the whole aspect of the wards uninviting and cheerless. Both attendants and patients seemed to have lost interest. The former could not make the wards attractive, no matter how much effort they made, while the latter were ever ready to give an additional dig to the already badly mutilated walls and woodwork. On account of their disturbed condition, several patients were unable to go to the general

dining-room, and were taking their meals from trays carried to the wards. Generally, when the meal was finished, the food which was left would be thrown on the floor to add further to the unsightly appearance. After many weary months of waiting, funds were obtained to renovate the wards and the work was pushed with all possible speed. During its progress the patients manifested considerable interest and often seemed to forget to be noisy while watching the improvements. At last the walls were made good, the ceilings and side walls were painted in attractive colors, pictures were hung, curtains were put at the windows, the floors were repaired and covered with inlaid carpet linoleum of attractive pattern and bright colors, rugs were placed in front of the beds, new cane settees took the place of the old wooden ones, rocking chairs were liberally supplied and the whole aspect of the wards was changed. The change in the wards, however, was no more marked than that in the patients. The destructive ones ceased their efforts at marring the walls and woodwork, and, most noticeable of all, those who had been in the habit of throwing the remains of their meals on the floor began to exercise considerable care to see that the pretty floor covering should not be stained even by the accidental spilling of food. Within a couple of weeks, through the efforts of the attendants and their own desires, those who had been thought too untidy for the general dining-room had mended their ways enough to be able to take their meals with their fellow patients and tray service became a thing of the past. The nurses also changed, and from being dispirited and discouraged workers, they became so much interested in the appearance of the wards and the patients that a healthy spirit of rivalry was aroused which has resulted in improved service in all the wards occupied by disturbed patients. There can be no doubt that these changes in the patients and nurses were brought about entirely by the improvements in the surroundings, which developed motives for self-control on the part of the former and gave encouragement for increased efforts to the latter.

ELECTRICITY IN ALCOHOLIC CASES.

For several months we have been giving cases of insanity with an alcoholic history systematic treatment by means of static electricity. The results are encouraging. In forty-three cases where the prominent symptoms were enervation, tremor and restlessness, after electricity had been applied several times, the patients rested better at night, became less tremulous and the appetite improved. Each patient was given an application of 15 minutes' duration daily, first by the roller electrode applied to the spine, followed by the multiple point electrode. The spark gap in the majority of cases was increased from one-fourth of an inch at the first application to one inch and a half at the twenty-fifth application.

HYDROTHERAPY.

Hydrotherapeutic measures have been systematically and successfully applied to our patients under the following conditions:

1. In hyper-acute maniacal states, half-hour hot baths, temperature 100 to 105, have been given daily with the result of subduing excitement, producing sleep and greatly reducing the amount of drug sedation required. The course of treatment has usually lasted from two to three weeks.

2. Cases of depression complicated by chorea have been greatly benefited by cold spinal compresses applied for half an hour twice daily for two or three weeks.

3. In depressed states in which neurasthenia and hypochondria are prominent symptoms, daily dry packs, followed by cold ablution with friction, have been found stimulating and beneficial. In cases which have been violent and resistive, when given the full bath, the hot wet pack has been substituted with almost the same results. We have not found the insane so refractory in submitting to hydrotherapeutic measures as might have been anticipated.

EQUIPMENT OF DISPENSARY.

The dispensary has been provided with a multinebulizer, which is expected to provide good results in the treatment of affections of the nose and throat.

GLASS ENCLOSURES AT THE CONSUMPTIVES' COTTAGES.

The porches of the two cottages occupied by tuberculous patients were enclosed early in the autumn, and the patients have thus been enabled to live practically out of doors during the winter. One end on each porch was left open, thus providing a constant supply of fresh air, while the glazed sides admitted the full rays of the sun. The two essentials for those suffering from consumption—air and sunlight—were thus secured.

SUN ROOM AT THE INFIRMARY.

Last summer the infirmary for men was greatly improved by the addition of a large sun room, in which the patients who are too feeble to walk are comfortably cared for outside of the wards during all seasons of the year. In the hottest days of summer the porch and awnings provide protection from the sun, while in winter the glass enclosure affords protection from the cold. It is a source of great comfort to the feeble and helpless men who occupy this building. They not only sit and doze in their comfortable chairs, but eat their meals there, returning to the wards only when ready for bed.

TRAINING SCHOOL FOR NURSES.

The training school for nurses has been made particularly attractive this year by Miss Caldwell's interesting lectures on cooking. The number wishing to profit by these lectures is so large that it will be impossible to instruct them all during the two months' course. An effort will therefore be made to continue her service for another month.

AMUSEMENTS AND RECREATION.

Constant efforts to provide amusements and recreation for the patients have been made during the winter. Dances, lectures, card parties, concerts and dramatic entertainments have been provided at the rate of two each week. The library has had many additions and the wards have been liberally furnished with games, balleto being the favorite at present.

The unusual fall of snow enabled us to keep the large sleigh in use for several days.

A class in physical culture has been formed from which we expect therapeutic effects as well as amusement.

STATISTICS FOR THE YEAR ENDING OCTOBER 1, 1900.

There were 527 admissions during the year and 489 discharges. The daily average population was 2087.

The recovery rate upon the number admitted was 28½ per cent, while it was 30 per cent upon the number discharged. This is about 4 per cent higher than it was for the previous year. The percentage of deaths upon the average number under treatment was much smaller than usual, it being only 8 per cent. In 1898 it was 10 per cent, while in 1899 it was 11 per cent.

TELEPHONE SYSTEM AND WATCHMAN'S CLOCKS.

The telephone system has been thoroughly overhauled and extended so that every ward and all the shops, engine-rooms, etc., are in direct connection with the main office.

The new watchman's clocks, with a capacity of 58 stations, have been installed at the main buildings, and the boxes have been so located that thorough night visitation is guaranteed to all the wards, attics, shops, barns, etc. We now have throughout the whole institution capacity for 108 stations.

THE COST OF OPERATING ELECTRIC IRONS.

From observations which have been made by our electrician to ascertain the cost of furnishing current to the electric irons, the following table has been prepared:

	Current consumed	Cost at 4 cts. per kilowatt
Small polishers	330 W	.0132
Small flat-irons	500 W	.02
Medium flat-irons	600 W	.024
Large flat-irons	680 W	.0272

The rate of 4 cents per kilowatt hour has been used, instead of 8 cents, which is the usual commercial rate. The rate is based upon the cost of the fuel consumed and ignores other operating expenses, as they would still be necessary even though the irons were not used.

While it cannot be denied that the cost of operating electric irons is considerably greater than that for operating the old-fashioned stoves

or gasoline heaters, the convenience, safety and comfort of the former so far outweigh the other older methods that their use is justified in hospital laundries where the electric plant is in operation during the day.

NEW BUILDINGS.

The administration building for the cottage department, the cold-storage building, and the coach house and farm barns mentioned in the October notes have been completed and are now in use. They have been found to answer in an admirable manner the purposes for which they were built.

THE PUPIL AFTER DEATH.

Dr. J. E. Courtney, first assistant physician, has for some time been noting the pupil after death, and has published the following observations in the *Medical Record:*

"Ordinarily the pupils are quite widely dilated and about equal after death, and shortly become fixed in a position of moderate dilatation. But whoever has done many autopsies and looked carefully at the pupils will certainly have noticed that there are many exceptions to this rule. My own observations convince me that in certain cases of disease of the brain or its membranes the pupils may retain after death the impress of the condition imparted to them by the disease which caused dissolution. If this fact could be established, and the data formulated, it would be highly interesting and of use in immediately suggesting the cause in cases of persons found dead, and in cases of persons dying without having had a physician in attendance. There appears nothing inconsistent in the idea of the muscular fibres of the iris becoming fixed in about the position in which they were at the time of death. I have seen this phenomenon in the following conditions, commented upon the sizes of the pupils before autopsy, and seen the condition which they suggested found.

"1. In persons dying of large cerebral hemorrhage, the pupils were large on the side opposite the lesion and remained perceptibly so at autopsy ten or twelve hours after death.

"2. In cases of death from paretic dementia with a general meningo-cerebritis and adhesions of the pia to the convolutions, the pin-point pupils seen in life were unchanged at autopsy.

"3. In the condition of pachymeningitis hæmorrhagica the pupil contracted on the side of the hemorrhage has been repeatedly found so at autopsies."

—*Buffalo State Hospital, Buffalo.*—No new construction has been begun within the past year. The Elmwood Building continues to fulfill its now indispensable function as a hospital for the care of acute cases. To enlarge the accommodations for the more strictly asylum class in the attempt to keep pace with the increase of the number of insane in this State, the State Commission in Lunacy has favorably recommended to the legislature the erection of a chapel and amusement hall, and resi-

dences for the superintendent and medical staff upon the grounds of the hospital, and the conversion of the upper floors of the administration building, now occupied by the officers, into wards for patients, thus supplying accommodations for patients at a less per capita cost than would be required to erect new buildings.

—*St. Lawrence State Hospital, Ogdensburg.*—Owing to the presence year by year of typhoid fever at the St. Lawrence State Hospital, Mr. Allan G. Hazen, sanitary engineer, was employed to examine into the water supply and report upon the feasibility of constructing a filtration plant. His report was to the effect that such a plant would cost about $20,000, and there would be an additional cost of $1000 for operating it. The cost of operating the pumping station was about $3500 yearly; this would make a total cost of $4500 a year for operating the plant and the filter beds, not including interest on the entire plant (pumping station and filter beds), the estimated cost of which was placed at $45,000. This report was being carefully considered when a proposition was received from the Board of Water Commissioners of the city of Ogdensburg to supply the institution with water for a period of ten years at an annual cost of $4000, with the privilege of renewal for an additional ten years. Accordingly a contract was entered into and the institution is now supplied by the city. The hospital expended about $12,000 for laying additional water-mains and installing a metre. The new water supply comes from Cranberry Lake in the Adirondacks. The water is soft and of an exceptionally fine character. It has now been used sufficiently long to judge of its purity and thus far no cases of typhoid have been traced to it. During the winter of 1900 over forty cases of typhoid fever were treated at the hospital, while during the present winter only two cases have occurred. One of these (a new attendant) was infected at her home in a distant village, while the second was in a patient who came down with the disease just about the time the change was being made in the water supply, and in this case the fever can be definitely ascribed to the use of St. Lawrence water.

Small-pox having been very prevalent in a number of towns situated in the hospital district, it became necessary to vaccinate the entire household, and the following results were obtained: total number vaccinated, 1739; of these 343 were apparently primary vaccinations and 1936 secondary. Of the primary cases there were only 12 failures, a percentage of 3.5, while in the secondary vaccinations the percentage of failures was 12.5. Of the total number of cases at least 20 had previously had small-pox, but a number of these cases responded to the vaccination.

A new feature in the medical work has been the fresh-air treatment for anæmia occurring in the acute psychoses and among the feeble. The idea is similar to the open-air treatment for tuberculosis as practiced by Dr. Trudeau in his sanitarium at Saranac Lake. The patients are well wrapped up in blankets and seated in steamer chairs on the

verandas, even during the coldest weather. They are kept out of doors in this way for from two and one-half to three hours a day. No disagreeable results have thus far been observed, while the benefits derived indicate that this measure will be a useful adjunct to other means of treatment. Many of the cases thus treated were unable on account of their weakened physical condition to take the usual out-of-door exercise.

To provide diversion and additional occupation it was proposed last autumn to hold a fair where the handiwork of the patients could be exhibited and sold. All entered with zeal into the enterprise, and as a result the fair, which was held in December, was unusually successful, sufficient money being obtained from the sales to cover all expenses for material used, and to provide a small fund for ward entertainment. The incentive was sufficiently great to induce many patients who were formerly idle to take part in the preparation. Hereafter it is to be one of the annual features of the institution, and plans are already in progress for the fair to be held next fall.

—*Manhattan State Hospital, West, Ward's Island, New York City.*—During September, 1900, the census of the hospital was increased by the transfer of two hundred male patients from the Manhattan State Hospital, East.

IMPROVEMENTS.

A bowling alley for the use of patients and employees was constructed during October. A large number of patients capable of enjoying this sport have been formed into clubs and derive great benefit and pleasure from the exercise.

A greenhouse, formerly in use at the Manhattan State Hospital, East, was erected in October and stocked with plants, chiefly from clippings given by the East Hospital. Besides affording a useful and congenial occupation to patients in caring for the flowers and plants, the wards will be kept supplied through the seasons with ornamental shrubs and flowering plants.

An ice and refrigerating plant was completed in September, 1900, which has proved a great economy.

A static electrical machine, with X-ray attachment, was purchased and set up and has already been of great use in the treatment of patients, besides being of advantage to the staff.

A pianola was purchased and placed in the convalescent ward.

Uniforms were adopted for the medical staff and were donned on the 1st of October, 1900.

CONTEMPLATED IMPROVEMENTS.

A solarium, two stories in height, is to be constructed for the patients in the phthisical ward. This will be of great benefit to patients suffering from tuberculosis. It is to be hoped that it will promote the cure of

some, and add to the comfort of all afflicted with this disease. Plans and specifications have been prepared.

Plans and specifications have been prepared by the State Architect and approved by the State Commission in Lunacy for a new dining-room for patients and women employees. This is a very much needed improvement. The new dining-room will adjoin the main kitchen, from which meals will be served.

Two additional boilers are to be placed in the power-house. The foundations are now being laid, and when the work is completed and the boilers erected, the heating capacity will be much increased.

A food conduit is to be constructed from the Verplanck Building to Wards 28, 29 and 30.

It is proposed to establish a library for the use of employees. This improvement has started out well, as donations by officers and employees are being cheerfully made, and the employees are taking great interest in it.

OHIO.—*Massillon State Hospital, Massillon.*—The assembly hall and employees' quarters building is nearing completion. This building will be ample to take care of all outside help, and for a time will also answer the purpose of a nurses' home. It is the intention to leave but one nurse, in addition to the night-watch service, on each cottage, the others to room at the employees' building. Contracts have been let for the constructing of cottages 8 and 9. These will be duplicates of cottages G and H, and will accommodate 150 patients. The contract price was $38,000 for the two cottages.

OREGON.—*Mt. Tabor Nervous Sanitarium, Portland.*—Work is now under way upon an additional cottage, which will make the tenth at the Mt. Tabor Nervous Sanitarium. It will be constructed with all the modern improvements. This cottage will be for mental cases and will be built without bars or screws.

Dr. Alicia F. Jeffery has been appointed superintendent. Dr. Jeffery was for two years superintendent of a hospital at Grand Rapids, and for three years was superintendent at St. Luke's Hospital at Denver.

PENNSYLVANIA.—*Pennsylvania Hospital for the Insane, Philadelphia.*—The managers of the Pennsylvania Hospital (including the two departments for the insane) have appointed a committee consisting of Benjamin H. Shoemaker, John B. Garrett, John Story Jenks and Drs. Thomas G. Morton and John B. Chapin to make suitable arrangements for the observance of the sesquicentennial anniversary of the opening of the hospital in 1751.

—*State Hospital for the Insane, Norristown.*—The pathologist will be compelled, hereafter, to examine the cattle at that institution in order to prevent tuberculosis, as certificates given by drovers are unreliable.

—*State Asylum for the Chronic Insane, Wernersville.*—The great need of an infirmary building has been met during the past year by the reconstruction of an old stone farmhouse. After the plans had been approved by the Board of Public Charities, the work was almost entirely done with the help of patients, and there is now a fairly well-equipped building for the care of the sick, and at a small expense. The building is well situated on the hillside south of the main building, and is easy of access. A diet kitchen attached has proved a valuable adjunct.

TENNESSEE.—*Eastern Hospital for the Insane, Knoxville.*—At the present session of the legislature the Board of Trustees have asked for an appropriation of $25,000 to erect another building, and for $10,000 to buy a farm upon which to colonize some of the quieter patients. There has been no change in the officers of the hospital in the last six months.

VIRGINIA.—*Western State Hospital, Staunton.*—In his last annual report, Dr. Blackford incorporates the following plea for epileptics:

"The time has now come when the State of Virginia should make some permanent provision for the care of epileptics. Epileptics are injured by contact with the insane, and the insane receive far greater injury by contact with epileptics. The State will be compelled either to put up separate buildings at each of the existing State hospitals for the exclusive accommodation for that afflicted class, or establish a separate institution on the 'colony plan' for all epileptics. In my last annual report I expressed my views fully on this subject, which I reiterate in this report.

"All three of the State hospitals for the white insane are in a state of 'chronic congestion' and are so crowded that it has become necessary, whenever there is an application for the admission of an acute or recent case, to change often several or more patients, to secure a room or bed for such a person, and a point has now been reached when changes seem almost impracticable. Were it not for the furlough system legalized by an act of the legislature, we could not admit another patient in this hospital, as the demand for room far exceeds the vacancies created by the discharges and deaths and removals from other causes.

"This overcrowded condition of our hospital wards could be relieved by the segregation of the epileptics in separate buildings, or by establishing an 'epileptic colony' for all epileptics, as they have at Gallipolis, Ohio, where there are separate buildings for the insane class, as well as the so-called sane epileptics.

"These epileptic patients should not be kept in a hospital for the insane. The effect of an epileptic seizure of a patient in the wards upon others not thus afflicted, and especially upon those on the way to recovery is extremely bad. While a number of the epileptics are rational at times, they are more or less the victims of an irritable temper, or epileptic or impulsive temper, and if there is any trouble or disturbance

on the wards an epileptic, not knowing his infirmity, is generally at the bottom of it.

"I hope sooner or later legislation will be encouraged, looking to the end of eliminating the epileptics from the wards of the State hospitals, and putting them in separate buildings, or establishing an 'epileptic colony' in the State."

—*Central State Hospital, Petersburg.*—The building for male epileptics was completed in December last and was at once occupied. All the epileptics in this hospital are now practically isolated from the rest of the patients. The plan works admirably.

The new buildings in this institution provide for all the colored insane in the State. As soon as the hospital is notified that a negro has been legally adjudged insane, a nurse is promptly sent after him. Female nurses are almost invariably sent for female patients. There are now in the hospital 1000 patients. Forty are on furlough. The capacity of the hospital is 1050.

The new commitment law has proved to be an excellent and satisfactory one. Facilities for the employment of the patients are being extended. During the winter over six hundred brooms and 450 mattresses were made chiefly by patients from material raised on the hospital farm.

The following is quoted from the last annual report of Dr. Drewry, the superintendent:

"Believing that occupation for the mind and body is one of the most *valuable agents* in the treatment of a large majority of the insane, we continue to provide for our patients as much congenial employment and recreation as practicable. Table No. 22 and the reports of the farm, laundry, sewing-rooms, shops, etc., indicate, in a general way, the amount of work done by the patients. Nearly 70 per cent of them are employed at one thing or another part of every work-day. Where the work is properly selected and directed, both *the patients and the State become the beneficiaries.* No one will question that the low per capita cost at this institution is due, in a very great measure, to the labor of the patients.

"In this connection, I desire to again suggest that, as soon as the finances will justify the expenditure, you erect a suitable brick building and equip it with tools and appliances, in order that more of our patients may be engaged in mechanical work. At present we are handicapped in broom-making, shoe-mending, mattress-making, and mechanical work generally."

Many minor improvements have been recently made throughout the hospital, the chief of which is fitting up an old brick residence for a storeroom, and converting the old storeroom in the executive building into offices and reception rooms.

—*Southwestern State Hospital, Marion.*—During the last year a new west wing has been completed after much delay for want of funds, etc. This gives us a valuable addition to the hospital, and one long needed

to give room for the insane in this section. This addition is a solid brick structure (134 feet long by 54 feet wide) on substantial rock foundation, three stories high and covered with slate. Each story has nineteen single rooms and three large associated rooms, with a central 12-foot hallway and a large day room at south end. This building is heated by steam and lighted by electricity from the central plant, supplied also with water (hot and cold) from the general system.

Metal ceilings have been used throughout the building and fire-proof (iron) stairways at each end of all the wards. It is separated from the main building fifty feet and more, and connected with lanes by a covered corridor with basement and overhead passageways, the overhead one with glass sides mostly serving as an excellent "solarium," or sun room for patients in winter.

The boiler plant of four boilers has been completely overhauled and remodeled during the last fall; three of the boilers were, upon advice of the inspector, retubed (40 new tubes being put in each), and all were placed upon new foundations, and fire-boxes thoroughly relined with fire-brick and made ready for winter service.

A complete change of the sewerage has also been effected, by which all the sewerage, kitchen drains and wastes, soapsuds, etc., from laundry are carried into the large main sewer-pipe leading into the river north of the hospital site.

The old wooden floors in the basement storerooms, balcony, workrooms, etc., have all been removed and are being replaced with grating and cement floors.

The changes and repairs have been long needed, have added much to the per capita cost of the year, but have added much to improve sanitary conditions. The capacity of the hospital has been increased to about 800.

West Virginia.—*West Virginia Hospital for the Insane, Weston.*—There has been installed in the hospital a pathological department, equipped with microscope (oil-immersion) galvanic and faradic batteries, paraphernalia for quantitative and qualitative urinary analysis, culture media, and other necessary appurtenances in bacteriological investigation. A room on the first floor of the Center Building with a southern exposure has been selected for this purpose and equipped with lavatory and necessary furniture.

In addition to the frequent consultation of the superintendent and medical staff, the discussion of important cases and review of articles from the leading journals, a training-school for the attendants has been established in the hospital, conducted under the supervision of the superintendent, consisting of lectures, delivered twice a week, by the assistant physicians and supervisors. The course of instruction given covers the following subjects: The general care of the sick; the managing of helpless patients in bed, in moving, changing bed and body linen, making of beds, giving baths, keeping patients warm or cool, pre-

venting and dressing bed-sores; the application of fomentations, poultices, and minor dressings; the preparing and serving of food, the feeding of helpless patients and those who refuse food, attendance upon patients requiring diversion and companionship; the observation of mental symptoms, delusions, hallucinations, delirium, stupor, and the care of excited, violent, and suicidal patients.

—*Second Hospital for the Insane, Spencer.*—There will be constructed a large reservoir for water and several wells will be drilled and connected with the reservoir by an air-lift system. Several wards will be refurnished and considerable money expended in refurnishing and improving the administration building.

DOMINION OF CANADA.—*Nova Scotia Hospital, Halifax.*—By virtue of a clause in the Revised Statutes of Nova Scotia, 1900, the name of the Nova Scotia Hospital for the Insane becomes changed, after February 1, 1901, to Nova Scotia Hospital. The men's section has been plumbed anew, in good style, with vitrified floors, and similar work will be commenced in the administration and women's sections at once. A new building is promised, the ground floor for an associate dining-room and the upper floor for an assembly room, and work will begin on it very soon.

Appointments, Resignations, Etc.

BARNES, DR. HARRY L., appointed Assistant Physician at the Danvers Insane Hospital, Danvers, Mass.

BISING, DR. ALBERT G., formerly Medical Interne at the Willard State Hospital, Willard, N. Y., promoted to be Junior Physician at the Long Island State Hospital, Kings Park, N. Y.

BODINGTON, DR. G. F., resigned the Superintendency of the Provincial Hospital for the Insane, New Westminster, B. C.

CAVANAUGH, DR. WILLIAM J., Medical Interne, transferred from the Willard State Hospital, Willard, N. Y., to the Hudson River State Hospital, Poughkeepsie, N.Y.

COLVER, DR. CAROLINE, appointed Pathologist at the Massillon State Hospital, Massillon, O.

CROFOOT, DR. WELLINGTON A., appointed Medical Interne at the Manhattan State Hospital, West, Ward's Island, N. Y.

DILL, DR. DANIEL M., formerly Chairman of the Committee on Hospitals of the Board of Freeholders of Essex County, N. J., appointed Superintendent of the Essex County Hospital for the Insane, Newark, N. J.

ELLIOTT, DR. JOHN G., formerly Medical Interne at the Manhattan State Hospital, West, Ward's Island, N. Y., promoted to be Junior Physician at the Hudson River State Hospital, Poughkeepsie, N. Y.

FINDLEY, DR. H. P., promoted to be First Assistant Physician at the Massillon State Hospital, Massillon, O.

FOSTER, DR. GEORGE W., formerly Assistant Physician at the Government Hospital for the Insane, Washington, D. C., appointed Superintendent of the Eastern Asylum for Insane, Bangor, Maine.

HINCKLEY, DR. LIVINGSTON S., resigned the Superintendency of the Essex County Hospital for the Insane, Newark, N. J., to enter upon private practice in Newark.

HINDLEY, DR. M. L., promoted to be Second Assistant Physician at the Massillon State Hospital, Massillon, O.

LA MOURE, DR. H. A., appointed Medical Interne at the Rochester State Hospital, Rochester, N. Y.

LOGIE, DR. BENJAMIN R., formerly of the Manhattan State Hospital, Ward's Island, N. Y., appointed Assistant Physician at the Government Hospital for the Insane, Washington, D. C.

MANCHESTER, DR., promoted to the Superintendency of the Provincial Hospital for the Insane, New Westminster, B. C.

MANCHESTER, DR. WILLIAM C., resigned as First Assistant Physician at the Massillon State Hospital, Massillon, O.

MOORE, DR. E. F., resigned as Second Assistant Physician at the Nova Scotia Hospital, Halifax, N. S.

MOUNTAIN, DR. J. H., promoted to be Assistant Physician at the Connecticut Hospital for the Insane, Middletown, Conn.

ROSS, DR. FRANK A., resigned as Assistant Physician at the Danvers Insane Hospital, Danvers, Mass.

SCHANG, DR. CHARLES L., resigned as Medical Interne at the Buffalo State Hospital, Buffalo, N. Y.

SIMCOE, DR. C. B., formerly Second Assistant Physician at the State Hospital for Insane, No. 2, St. Joseph, Mo., appointed Superintendent of the Missouri Colony for Feeble-Minded and Epileptic, Marshall, Mo.

SIMON, DR. THEODORE W., appointed Medical Interne at the Willard State Hospital, Willard, N. Y.

SMILEY, DR. ALTON L., appointed Medical Interne at the Buffalo State Hospital, Buffalo, N. Y.

SMITH, DR. J. C., appointed Second Assistant Physician at the State Hospital for Insane, No. 2, St. Joseph, Mo.

STOKER, DR. W. A., formerly Superintendent of the Southern Hospital for the Insane, Anna, Ill., appointed Superintendent of the Indiana Southern Hospital, Evansville, Ind.

SWEET, DR. ERNEST A., resigned as Medical Interne at the Hudson River State Hospital, Poughkeepsie, N. Y.

THOMAS, DR. A. C., appointed Assistant Physician at the Connecticut Hospital for the Insane, Middletown, Conn.

INDEX

LIST OF ILLUSTRATIONS